

TUESDAY POSTERS

PROTEOMICS: QUANTITATION TECHNIQUES, 001 - 037		TP 011	Compatibility of Various Sample Handling Methods with Amine-based Isotope Labeling Reactions in Quantitative Proteomics; <u>Lu Chen</u> ; Andy Lo; Yanan Tang; Liang Li; <i>University of Alberta, Edmonton, Canada</i>
TP 001	Inferring Physically Adjacent Interactions of Yeast Proteins from Fabricated Quantitative Profiles Generated by Free Flow Electrophoresis; <u>Zhi-bin Ning</u> ; Qing-run Li; Rong-xia Li; Rong Zeng; <i>Shanghai Institutes for Biological Sciences, Shanghai, China</i>	TP 012	Towards the Validation of an Absolute Quantification Method using LC-MS/MS for IGF-1 and IGFBP-3; <u>Stephanie Kirsch</u> ; Joelle Widart; Edwin De Pauw; <i>University of Liege, Liege, Belgium</i>
TP 002	Application of Guanidination Chemistry for Protein Identification and Quantitation by LC-ESI MS/MS and LC-MALDI MS; <u>Michael Harder</u> ¹ ; Vic Spicer ¹ ; John P. Cortens ² ; Werner Ens ¹ ; Kenneth G. Standing ¹ ; John A. Wilkins ¹ ; Oleg V. Krokhin ¹ ; ¹ <i>University of Manitoba, Winnipeg, Canada</i> ; ² <i>Manitoba Centre for Proteomics and Systems Biology, Winnipeg, Canada</i>	TP 013	Problems Encountered in Absolute Quantification and Stoichiometry Determination of Protein Complexes; <u>Johann Holzmann</u> ¹ ; Mathias Madalinski ¹ ; Robert Kurzbauer ¹ ; Peter Pichler ¹ ; Michael Schutzbier ¹ ; Otto Hudecz ¹ ; Lukas A Huber ² ; Karl Mechtler ¹ ; ¹ <i>IMP, Vienna, Austria</i> ; ² <i>Biocenter, Innsbruck, Austria</i>
TP 003	Top-Down Quantitation and Characterization of Reductive Alkylation-Modified Proteins; <u>Zhiguo Zheng</u> ² ; <u>Weiming Wang</u> ¹ ; Yong Liang ¹ ; Joseph Fernandez ¹ ; Haiteng Deng ¹ ; ¹ <i>The Rockefeller University, New York, NY</i> ; ² <i>Zhejiang Cancer Research Institute, Hangzhou, China</i>	TP 014	Optimization of Digestion Parameters for Protein Quantification; <u>Jessica Norrgran</u> ; Tracie L. Williams; Adrian R Woolfitt; Maria L. Solano; James L. Pirkle; John R. Barr; <i>CDC, Atlanta, GA</i>
TP 004	DiART (Deuterium isobaric Amine Reactive Tag) Reagents for Quantitative Proteomics; <u>Shuwei Li</u> ; <i>Center for Advanced Research in Biotechnology, Rockville, MD</i>	TP 015	Comparison of Peptide Fractionation by Basic pH Reversed Phase vs. SCX for Verification of Protein Biomarker Candidates in Plasma; <u>Michael Burgess</u> ¹ ; Hasmik Keshishian ¹ ; Veronica Saenz-vash ² ; Terri Addona ¹ ; Steven A. Carr ¹ ; ¹ <i>Broad Institute, Cambridge, MA</i> ; ² <i>Novartis Institutes for BioMedical Research, Cambridge, MA</i>
TP 005	Trypsin-Catalyzed 18O-Monolabeling of Peptide Fragments for Quantitative Proteomics; <u>Masaru Mori</u> ¹ ; Kohei Abe ^{1,2} ; Hiroaki Yamaguchi ^{1,2} ; Junichi Goto ² ; Miki Shimada ^{1,2} ; Nariyasu Mano ^{1,2} ; ¹ <i>Tohoku University, Sendai, Japan</i> ; ² <i>Tohoku University Hospital, Sendai, Japan</i>	TP 016	Rapid Method Development for Protein Quantitation Using MRM with Isotopically Labeled Protein as a Global Internal Standard; <u>Bryan Prazen</u> ¹ ; Jayson A. Falkner ² ; Philip Mayer ³ ; Tomas Vaisar ³ ; ¹ <i>Insilicos, Seattle, WA</i> ; ² <i>Single Organism Software Inc, Beaverton, OR</i> ; ³ <i>University of Washington, Seattle, WA</i>
TP 006	An Attempt to Quantitative Analysis for Clinical Proteomics by Liquid Chromatography/ESI-Ion Trap MS Using Stable Isotope-Labeled Small Organic Molecules; <u>Sadamu Kurono</u> ^{1,2} ; Yuka Kaneko ^{1,2} ; Takeshi Ueda ³ ; Masayuki Maruoka ³ ; Hanjoung Cho ⁴ ; Satomi Niwayama ⁴ ; ¹ <i>Osaka University Graduate Schl, Osaka, Japan</i> ; ² <i>Wako Pure Chemical Industries, Ltd., Osaka, Japan</i> ; ³ <i>Chiba Cancer Center, Chiba, Japan</i> ; ⁴ <i>Texas Tech University, Lubbock, TX</i>	TP 017	Identification of Differentially Expressed Proteins In Transgenic Mouse Models of Psoriasis Using Label Free Analyses; <u>Kathleen C. Lundberg</u> ; Chao Yuan; Julie Wolfram; Nicole Ward; Mark Chance; <i>Case Western Reserve Univ., Cleveland, OH</i>
TP 007	Variable Mass H/D-Isotope Dipeptide Tags for Simultaneous Peptide Sequencing and Protein Quantitation; <u>Seung Koo Shin</u> ; Jongcheol Seo; Min-Soo Suh; Hye-Joo Yoon; <i>POSTECH, Pohang, South Korea</i>	TP 018	What Is A Better Approach to Quantifying Endogenous Molecules: Using A Labeled Compound, Surrogate Matrix, or Non-Labeled Compound?; <u>Bob Xiong</u> ; Kojo Abdul-Hadi; Patrick Bennett; Lily Li; <i>Tandem Labs, A LabCorp Company, Woburn, MA</i>
TP 008	Title: Solid-Phase SCX Column Digestion Coupled with iTRAQ™ Labeling of Immuno-Precipitated, Low-Abundant Proteins; <u>Vivian Nguyen</u> ¹ ; Andrew James ¹ ; Kelly Williton ¹ ; Anna Yue Dai ¹ ; Brett Larsen ¹ ; Tony Pawson ¹ ; Claus Jorgensen ¹ ; Karen Colwill ¹ ; Tony Pawson ^{1,2} ; ¹ <i>Samuel Lunenfeld Research Institute, Toronto, Canada</i> ; ² <i>University of Toronto, Toronto, Canada</i>	TP 019	Development of a Novel Solid-Phase Isotope-Coded Cysteinyl Label to Study Protein Abundance During Marek's Disease Virus (MDV) Infection; <u>Mialy F. Ramaroson</u> ; Hsiao-Ching S. Liu; Michael B. Goshe; <i>NC State University, Raleigh, NC</i>
TP 009	Comparison of SCX and OGE Fractionation Approaches in Quantitative Shotgun Analysis of iTRAQ Labeled Arabidopsis Plant Extracts; <u>Yong Yang</u> ¹ ; Xiangjun Zhou ² ; Li Li ^{1,2} ; Sheng Zhang ² ; Theodore W Thannhauser ¹ ; ¹ <i>USDA-ARS at Cornell University, Ithaca, NY</i> ; ² <i>Cornell University, Ithaca, NY</i>	TP 020	Investigation of Mitochondrial Protein Changes in Response to RNA Interference Knock-down of Mitochondrial Superoxide Dismutase (SOD2) in Drosophila melanogaster; <u>David C. Simpson</u> ; Ian Martin; Mike Grotewiel; Scott Gronert; <i>Virginia Commonwealth University, Richmond, VA</i>
TP 010	siRNA-Mediated Target Silencing and Quantitative Proteomics Using iTRAQ Reagent Chemistry; <u>Albina Abdurakhmanova</u> ¹ ; Rita Schlichting ¹ ; Christie L. Hunter ³ ; Christof Lenz ² ; Birte Sönnichsen ¹ ; Christophe J. Echeverri ¹ ; Dietmar Waidelich ² ; Cornelia Weiss-Haljiti ¹ ; <u>Matthias Glueckmann</u> ² ; ¹ <i>Cenix BioScience GmbH, Dresden, Germany</i> ; ² <i>Applied Biosystems Germany, Darmstadt, Germany</i> ; ³ <i>Applied Biosystems, Foster City, CA</i>	TP 021	Quantitative Proteomics to Investigate Hypoxia in Renal Carcinoma Cells; <u>Wendy D. Haffey</u> ; Olga Mikhaylova; Maria F. Czyzyk-krzeska; Kenneth D. Greis; <i>University of Cincinnati, Cincinnati, OH</i>
TP 022		TP 023	Differential Isotopic Labeling of Interfibrillar Mitochondrial Thiol Proteins; <u>Jing Wang</u> ; Claudia Maier; <i>Oregon State University, Corvallis, OR</i>
			OxMRM: Further Developments to Quantify Oxidation of Endogenous Redox-Sensitive Cysteines Using Multiple Reaction Monitoring; <u>Jason Held</u> ; Steven R. Danielson; Judy Campisi; Chris Benz; Bradford W. Gibson; <i>Buck Institute for Age Research, Novato, CA</i>

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TP 024 **Deciphering the Phosphorylation "Bar Code" of the β 2 Adrenergic Receptor and Monitoring its Dynamics;** Kunhong Xiao¹; Kelly Nobles¹; Kazuishi Kubota²; Judit Villen²; Wilhelm Haas²; Bo Zhai²; Xue Li²; Jinpeng Sun¹; Makoto Hara¹; Seungkirl Ahn¹; Erin Whalen¹; Sudha Shenoy¹; Steven Gygi²; Robert Lefkowitz¹; ¹Duke University Medical Cent, Durham, NC; ²Harvard Medical School, Boston, MA

TP 025 **Quantitative Mouse Tissue Phosphoproteomics: Adapting a Chemical Labeling Strategy (Reductive Dimethylation: ReDi) to a Phosphoproteomics Pipeline;** Joshua T. Wilson-Grady; Jan Seebacher; Steven Gygi; Dept. of Cell Biology, Harvard Medical School, Boston, MA

TP 026 **Quantifying Cell Cycle-Dependent Changes in Posttranslational Modifications and Interacting Network of the Yeast 26S Proteasome;** Robyn Kaake¹; Peter Kaiser¹; Lan Huang²; ¹Univ. of California, Irvine, Irvine, CA; ²University of California, Irvine, CA

TP 027 **Determination of ChIP Antibody Specificity for Histone H3 Modifications by SILAC and a Specialized Search Engine;** Jacob D. Jaffe¹; Emily Rudomin²; Karl R. Clauiser³; Steven A. Carr²; ¹The Broad Institute of Harvard, Cambridge, MA; ²Broad Institute, Cambridge, MA; ³Broad Institute of MIT and Har, Cambridge, MA

TP 028 **Characterization of Non-Canonical Polyubiquitin Chains by Quantitative Mass Spectrometry;** Lilian Phu; Anita Izrael-Tomasevic; Domagoj Vucic; Ivan Bosanac; Sarah Hymowitz; David Arnott; Donald S Kirkpatrick; Genentech, Inc., South San Francisco, CA

TP 029 **Development of Scheduled Multiple Reaction Monitoring (sMRM) Methods for Relative Quantification of Proteins Involved in ShcA-Mediated Signalling Network;** Cunjie Zhang¹; Yong Zhang¹; Lorne E B Taylor¹; Andrew James¹; Stephen A Tate²; Tony Pawson¹; ¹SLRI, Mt. Sinai, Toronto, ON; ²MDS Sciez, Toronto, ON

TP 030 **Absolute Quantitation of Phosphorylation Dynamics in the Analysis of Human Breast Cancer Signaling Pathways Using Multiple Reaction Monitoring Mass Spectrometry;** Dominik Domanski; Michael Kuzyk; Leanne B Ohlund; Tyra Cross; Christoph Borchers; UVic-GBC Proteomics Centre, Victoria, BC

TP 031 **Relative Quantitation of Differential Phosphorylation Patterns in the Activation Loop of Cell Cycle Checkpoint Protein Chk-2;** Michael D. Ward; Cindy Guo; Julius Nyalwidhe; Jessica Tiedebohl; Oliver John Semmes; Eastern Virginia Medical School, Norfolk, VA

TP 032 **Label-Free Relative Quantification of Control/Treated IMAC Enriched C Elegans Proteins Using an Alternative Scanning LCMS Approach;** Joanne B Connolly¹; Holger Husi²; Fiona McAllister²; M W Walkinshaw²; V J Butler³; A P Page³; Perdita E Barran²; ¹Waters, Manchester, UK; ²The University of Edinburgh, Edinburgh, UK; ³University of Glasgow, Glasgow, UK

TP 033 **Quantitative Proteomic Approaches for the Determination of Serum Proteome and Phosphoproteome in Patients with Benign Prostate Hyperplasia and Prostate Cancer;** Theodoros Roumeliotis¹; Nicolaie Eugen Damoc²; Michaela Scigelova²; Thomas Moehring²; Martin Hornshaw²; Spiros D. Garbis¹; ¹Academy of Athens, Athens, Greece; ²Thermo Fisher Scientific, Bremen, Germany

TP 034 **Label-Free Quantification Approach on Enriched Phosphopeptides;** Xiaolei Xie¹; Shun Feng¹; Huy Vuong¹; Yashu Liu¹; Steve Goodison²; David M. Lubman¹; ¹University of Michigan, Ann Arbor, MI; ²University of Florida, Jacksonville, FL

TP 035 **A Simple Label-free LC-MS/MS Strategy Towards Comprehensive Phosphoproteomics View that Depict the Mechanisms of Cancer Cell Invasion;** Yi Ting Wang¹; Chia-feng Tsai²; Tzu-Chan Hong³; Chih-chiang Tsou⁴; Pei-yi Lin⁶; Tse-Ming Hong⁵; Pan-Chyr Yang^{3,5}; Ting-yi Sung⁴; Wen-Lian Hsu⁴; Yu-Ju Chen^{6,7}; ¹Department of Applied Chemistry National, Chia-Yi University, Chiayi, Taiwan; ²National Taiwan Normal University, Taipei, Taiwan; ³School of Medicine, National Taiwan University, Taipei, Taiwan; ⁴Inst. Info Sci, Acad. Sinica, Nankang, TAIWAN; ⁵Institute of Biomedical Science, Academia sinica, Taipei, Taiwan; ⁶Institute of chemistry and Genomics Research Cente, Academia Sinica, Taipei, Taiwan; ⁷National Core Facilities for Proteomics Research, National Science Council, Taipei, Taiwan

TP 036 **Simplified Method for Quantifying Phosphopeptides from In-Gel Digestions Using 8-Plex iTRAQ Reagents;** Tatiana N. Boronina; Chen Qiu; Daniel J. Leahy; Robert N. Cole; Johns Hopkins School of Medicine, Baltimore, MD

TP 037 **Comparison of Protein Identification and Quantification between PQD/LTQ and Hybrid Triple Quadrupole/Linear Ion Trap;** Wells Wu¹; Guanghui Wang¹; Eric M. Billings¹; Panthip Rattanasinganchan²; Paul A. Insel³; Rong-Fong Shen⁴; ¹NH, Bethesda, MD; ²Huachiew Chalermprakiet University, Thailand, Thailand; ³Department of Pharmacology, UC San Diego, La Jolla, CA; ⁴NIH, NIA, Baltimore, MD

BIOINFORMATICS, 038 - 071

TP 038 **The Effects of Mass Accuracy on the Statistical Validation of Peptide Identifications from MS/MS Data;** Ron Orlando¹; George Zohrabyan¹; Art Nuccio¹; James Atwood²; Brent Weatherly²; ¹University of Georgia, Athens, GA; ²BioInquire, LLC, Athens, GA

TP 039 **Simulating an LC-MS Analysis of a Virtual Proteome: Does Mass Resolution Matter?** Marc V. Gorenstein; Scott Geromanos; Dan Golick; Jim Langridge; Waters Corporation, Milford, MA

TP 040 **Peptide Database Search Strategies to Improve Peptide Identifications Using High Resolution Mass Spectrometry;** Edward J. Hsieh; Michael R. Hoopmann; Brendan Maclean; Michael J. MacCoss; University of Washington, Seattle, WA

TP 041 **Orthogonal Criteria for Validation of MS/MS Based Peptide Identifications in Shotgun Proteomics;** Anton A. Goloborodko¹; Corina Mayerhofer²; Alexander R. Zubarev²; Irina A. Tarasova¹; Alexander V. Gorshkov³; Roman A. Zubarev²; Mikhail V. Gorshkov¹; ¹Institute of Energy Problems of Chemical Physics, Moscow, Russian Federation; ²Uppsala University, Uppsala, Sweden; ³N.N. Semenov's Institute of Chemical Physics, Moscow, Russian Federation

TP 042 **Using NISTMSQC to Monitor Changes in the Proteolytic Products of Human Serum Albumin During Tryptic Digestion;** Lisa E. Kilpatrick¹; Yuri Mirokhin²; Jeri Roth²; Paul Rudnick²; Stephen E. Stein²; ¹NIST, Hollings Marine Lab, Charleston, SC; ²NIST, Gaithersburg, MD

TP 043 **Unbiased Statistical Analysis for Multi-Stage Proteomic Search Strategies;** Logan J Everett,

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TP 044 **Charlene Bierl; Stephen R Master; University of Pennsylvania, Philadelphia, PA**
Quality of Database Matches for MS/MS Spectra Can Be Computed Analytically; Andrey Gorin; Nikita Arnold; Robert M. Day; Tamah Fridman; *Oak Ridge National Laboratory, Oak Ridge, TN*

TP 045 **Assessment of Peptide-Spectrum Matches Without Using a Decoy Database;** Yong Li; Predrag Radivojac; Randy J. Arnold; Haixu Tang; *Indiana University, Bloomington, IN*

TP 046 **Local Target-Decoy: A Simple and Effective Validation Method for Shotgun Proteomics Using High Resolution Mass Spectrometry;** Jong Wha Joanne Joo¹; Seungjin Na²; Je-hyun Baek¹; Cheolju Lee¹; Eunok Paek²; ¹*Korea Institute of Science and Technology, Seoul, Rep. of Korea*; ²*Univ. of Seoul, Seoul, Rep. of Korea*

TP 047 **Improved peptide identification using implicit properties learned from transduction support vector machines;** Michael J Sweredoski; Sonja Hess; *Caltech, Pasadena, CA*

TP 048 **Finding Peptides with Confidence;** Shane L Hubler; Graeme Mcalister; Joshua J. Coon; Gheorghe Craciun; *Univ of Wisconsin-Madison, Madison, WI*

TP 049 **Evaluation of Consensus Method Performance in Peptide Identification of Two Known Protein Data Sets;** Tamanna Sultana; Rick Jordan; James Lyons-Weiler; *University of Pittsburgh, Pittsburgh, PA*

TP 050 **Novel Probability-Based Consensus Scoring Improves Identification Rates in Tandem Mass Spectrometry-Based Peptide Identification;** Sven Nahnsen^{1,2}; Andreas Bertsch²; Alfred Nordheim¹; Oliver Kohlbacher²; ¹*Proteome Center, University of Tuebingen, Tuebingen, Germany*; ²*Center of Bioinformatics, University of Tuebingen, Tuebingen, Germany*

TP 051 **Analysis of Large-Scale Shotgun Proteomic Datasets Containing Multiple Replicates;** Damian Fermin¹; Hyungwon Choi¹; Alexey Nesvizhskii²; ¹*University of Michigan, Pathology Department, Ann Arbor, MI*; ²*University of Michigan, Ann Arbor, MI*

TP 052 **Identifying Proteins Directly from Tandem Mass Spectra;** Marina Spivak¹; Jason Weston¹; Michael J. MacCoss²; William Stafford Noble²; ¹*NEC, Princeton, NJ*; ²*UW, Seattle, WA*

TP 053 **Peptide Identification with Direct Computation of the Significance Level of the Results;** Jan Eriksson¹; David Fenyo²; ¹*Swedish University of Agricultural Sciences, Uppsala, Sweden*; ²*The Rockefeller University, New York, NY*

TP 054 **Computational Analysis of Unassigned High Quality Spectra from Human T Leukemic Cells;** Kang Ning; Alexey Nesvizhskii; *University of Michigan, Ann Arbor, MI*

TP 055 **Improving Confidence in Spectrum Mill's Sequence/Spectrum Matching Using a Refined Peptide MS/MS Fragmentation Model;** Karl R. Clauser; Steven A. Carr; *Broad Institute of MIT and Harvard, Cambridge, MA*

TP 056 **A Computer Model for Predicting CID Spectra of Glycopeptides;** Zhongqi Zhang¹; Bhavana Shah²; ¹*Amgen, Inc., Thousand Oaks, CA*; ²*Amgen Inc., Thousand Oaks, CA*

TP 057 **Incorporating Theoretical Intensity Prediction Information of Tandem MS Spectra is an Imperative for Eukaryotic Proteomics;** Chandra Narasimhan; *UT-ORNL Genome Science & Tec, Oak Ridge, TN*

TP 058 **Improving Tandem Mass Spectra Identification Rate Based on Calibrating the Masses and Charges of Precursors by Continuous MS Scans;** Zuofei Yuan^{1,2}; Haipeng Wang^{1,2}; Yan Fu^{1,2}; Hao Chi^{1,2}; You Li^{1,2}; Liyun Xiu^{1,2}; Wenping Wang^{1,2}; Chao Liu^{1,2}; Leheng Wang^{1,2}; Ruixiang Sun^{1,2}; Simin He^{1,2}; ¹*Institute of Computing Technology, CAS, Beijing, China*; ²*Key Lab of Intelligent Information Processing, CAS, Beijing, China*

TP 059 **Processing Extreme ESI Data Using a New Peak Modelling Method;** Jenny Albanese¹; Tony Ferrige²; Stuart Ray²; Song Ye³; Robert Alecio²; ¹*Applied Biosystems, South Lake Tahoe, CA*; ²*Positive Probability Limited, Isleham, Cambs, UK*; ³*Applied Biosystems, Framingham, MA*

TP 060 **Non-Empirical Approach for Isotopic Distribution Deconvolution in Mass Spectra of Complex Organic Compounds;** Ilya A Agron^{1,2}; Dmitriy M. Avtonomov^{1,2}; Eugene Nikolaev^{1,3}; ¹*Institute for Energy Problems of Chemical Physics, Moscow, Russian Federation*; ²*The Institute of Biomedical Chemistry, Moscow, Russia*; ³*Emanuel Institute of Biochemical Physics, Moscow, Russia*

TP 061 **Memory Efficient Calculation of the Isotopic Mass States of a Molecule;** Long Li; Pengyu Hong; Jeffrey Agar; *Brandeis University, Waltham, MA*

TP 062 **Combining High Resolution Separation Techniques and High Frequency Acquisition to Improve the Deconvolution of Information from FragALL Experiments;** Gordana Ivosey; Ron Bonner; J.c. Yves Leblanc; Nic Bloomfield; Stephen A Tate; *MDS Analytical Technologies, Concord, On, ON*

TP 063 **The Need for Speed: An Evaluation of Automated Charge State Deconvolution of LC/MS Data;** Timothy R. Croley¹; Denis Andrzejewski²; John H. Callahan³; Steve Musser⁴; Tracie Williams⁵; ¹*Commonwealth of Virginia, Richmond, VA*; ²*US Food & Drug Administration, College Park, MD*; ³*FDA/CFSAN, College Park, MD*; ⁴*US FDA, College Park, MD*; ⁵*Centers for Disease Control and Prevention, Atlanta, GA*

TP 064 **Statistical Approach for High Throughput Analysis of Ultra-High Resolution Mass Spectra of Plant Extracts;** Dong Wan Lim; Kyu Hwan Park; Jang Mi Jin; Jong Shin Yoo; Hyun Sik Kim; *Korea Basic Science Institute (KBSI), Seoul, South Korea*

TP 065 **On the Usage of the Information About the Number of Carbon Atoms in Peptides for Protein Identification;** Dmitriy M. Avtonomov^{1,2}; Ilya A Agron^{1,2}; Eugene Nikolaev^{1,3}; ¹*Institute for Energy Problems of Chemical Physics, Moscow, Russian Federation*; ²*The Institute of Biomedical Chemistry, Moscow, Russia*; ³*Emanuel Institute of Biochemical Physics, Moscow, Russia*

TP 066 **Metabolic Labeling Validation of Peptide MS/MS Spectral Library and Development of a New Spectral Matching Algorithm for Protein Identification;** Mingguo Xu; Liang Li; *University of Alberta, Edmonton, Canada*

TP 067 **The Development of a Summarization and Visualization Method for MSn Information Based on Social Network Analysis;** Shinichi Yamaguchi; *Shimadzu Corporation, Kyoto, Japan*

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TP 068 **On the Application of a New MALDI/MS NIST Library to Cancer Disease Diagnosis; Simone Cristoni¹; Sinues Pablo²; Luigi Rossi Bernardi³; ¹ISB srl, Milan, Italy; ²National Council for Research ITB - CNR, Milan, Italy; ³Multimedica Lab, Milan, Italy**

TP 069 **Merged Spectrum for Metabolite Identification in MassBank; Hisayuki Horai¹; Masanori Arita²; Yoshito Nihei¹; Takaaki Nishioka¹; ¹IAB, Keio Univ. & BIRD, Tsuruoka, Japan; ²University of Tokyo, Kashiwa, Japan**

TP 070 **Cluster Analysis for Q-TOF MS/MS Data; Xiaoyu Yang; Pedatsur Neta; Yamil Simon; Stephen Stein; NIST, Gaithersburg, MD**

TP 071 **A Systematic Investigation on the Improvement in Sensitivity of Spectral Library Searching over Sequence Database Searching in Proteomics; Xin Zhang; Wenguang Shao; Henry H. Lam; Hong Kong University of Science and Technology, Clear Water Bay, Hong Kong**

PROTEOMICS: BIOMARKER DISCOVERY, 072 - 103

TP 072 **Comparative Proteomic Analysis of Normal and Malignant Breast Epithelial Cells Using Laser Capture Microdissection/ LC-MS/ and Label-Free Quantification; Sangwon Cha¹; Elizabeth Ann Richardson²; Dipak A Thakur¹; Tomas Rejtar¹; Shiawlin Wu¹; Dennis C. Sgroi²; Barry L. Karger¹; ¹Barnett Institute, Northeastern University, Boston, MA; ²Massachusetts General Hospital, Boston, MA**

TP 073 **Cell Surface and Secreted Protein Profiles of Human Thyroid Cancer Cell Lines Reveal Distinct Glycoprotein Patterns; Ten-yang Yen¹; Arthur Arcinas¹; Nicole Haste¹; Angela Castanieto¹; Bruce Macher¹; Electron Kebebew²; ¹San Francisco State University, San Francisco, CA; ²University of California at San Francisco, San Francisco, CA**

TP 074 **Reproducibility and Repeatability in Proteomic Analyses by LC-MS/MS; David L. Tabb¹; Lorenzo Vega-Montoto²; Asokan Mulayath Variyath²; Amy-Joan L. Ham¹; David M. Bunk³; Lisa E. Kilpatrick⁴; Paul Rudnick³; Dean D. Billheimer⁵; Amanda Paulovich⁶; Daniel C. Liebler¹; Cliff Spiegelman²; Clinical Proteomic Technology Assessment for Cancer Network⁷; ¹Vanderbilt University, Nashville, TN; ²Texas A&M University, College Station, TX; ³National Institute of Standards and Technology, Gaithersburg, MD; ⁴NIST, Hollings Marine Laboratory, Charleston, SC; ⁵University of Arizona, Tucson, AZ; ⁶Fred Hutchinson Cancer Research Center, Seattle, WA; ⁷National Cancer Institute, Bethesda, MD**

TP 075 **The Search for a Chitin Pattern Recognition Receptor; Karina Vega; Diana Diaz Arevalo; Teresa Hong; Karine Bagramyan; Markus Kalkum; City of Hope, Duarte, CA**

TP 076 **Secretory Proteome Analysis Identifies New Markers for Detection of High Risk Papillomavirus-Positive Cervical Cancer; Tapas Manna; Rajeev Samant; Lewis Pannell; Mitchell Cancer Institute, Univ of South Alabama, Mobile, AL**

TP 077 **Proteomic Profiling of Maternal Plasma in First and Third Trimester by Combinatorial Peptide Affinity Chromatography and SELDI-TOF Mass Spectrometry; Mike Hartenstine; Danielle Ippolito; Peter Napolitano; Madigan Army Medical Center, Tacoma, WA**

TP 078 **Finding Preeclampsia Biomarkers in Chorion Villus Biopsies by Mass Spectrometry; Coskun Güzel; Eric A.P. Steegers; Joke A. Polak-Knook; Robert-Jan J.H. Galjaard; Pieter Derkx; Theo M. Luider; Erasmus MC, Rotterdam, Netherlands**

TP 079 **Label-Free Quantitation of Proteins by Liquid Chromatography-Multiple Reaction Monitoring Mass Spectrometry in Human Tissues; Haixia Zhang¹; Qinfeng Liu²; Dean D. Billheimer³; Robbert J.C. Slebos¹; Daniel C. Liebler¹; ¹Vanderbilt University, Nashville, TN; ²Campbell University, Buies Creek, NC; ³University of Arizona, Tucson, Arizona**

TP 080 **MALDI-TOF MS is Perspective Method for Profiling Biomarkers Bound to Albumine to Detection Lung Cancer; Valeriy Shevchenko; Natalia Arnotskaya; Elena Alekseeva; Elena Isaeva; Bakhrum Akhmedov; Irina Zborovskaya; Boris Polotskii; N. N. Blokhin Russian Cancer Research Center, Moscow, Russian Federation**

TP 081 **A Label-free Approach to Quantitate Novel Ectopic and Intrauterine Pregnancy Serum Biomarkers; Lynn A. Beer¹; Kurt T. Barnhart²; David W. Speicher³; ¹The Wistar Institute, Philadelphia, PA; ²University of Pennsylvania, Philadelphia, PA; ³Wistar Institute, Philadelphia, PA**

TP 082 **Rapid Differential Mass Spectrometry (dMS) for Biomarker Discovery; Yi Du; Matthew Mazur; Nathan Yates; Ronald Hendrickson; Merck Research Laboratories, Rahway, NJ**

TP 083 **Analysis of Human Pancreatic Tissue and Plasma Peptidome Reveals Potential Biomarkers for Pancreatic Cancer; Kwasi Antwi¹; Galen Hostetter²; Michael J. Demeure²; G. Anton Decker³; Yvette Ruiz¹; Tim Sielaff⁵; Larry Koep⁴; Paul Hanavan¹; Douglas Lake¹; ¹School of Life Sciences, Arizona State University, Tempe, AZ; ²Translational Genomics Research Institute, Phoenix, AZ; ³Mayo Clinic Scottsdale, Scottsdale, AZ; ⁴Banner Good Samaritan Medical Center, Phoenix, AZ; ⁵Virginia Piper Cancer Center, Rochester, MN**

TP 084 **Discovery of Protein Biomarkers for Identification of Bacterial Isolates from Indoor Air; Jennifer Intelicato-Young; Karen Fox; Alvin Fox; University of South Carolina, Columbia, SC**

TP 085 **Proteomic Analyses of Pancreatic Cyst Fluids; Bhavinkumar B. Patel; Eileen Ke; Tiffany Liu; Xin-Ming Li; Oleh Haluszka; John P. Hoffman; Hormoz Ehya; Nancy A. Young; James C. Watson; David Weinberg; Minh-huyen T. Nguyen; Steven J. Cohen; Neal J. Meropol; Samuel Litwin; Jeffrey L. Tokar; Anthony T. Young; Fox Chase Cancer Center, Philadelphia, PA**

TP 086 **Identification and Quantification of Potential Bladder Cancer Biomarkers in Urine by Isotope Labeling and Mass Spectrometry; YI-TING CHEN¹; Hsiao-Wei CHEN¹; Ting Chung¹; Chih-Ching Wu¹; Jau-Song Yu¹; Meng-Chieh CHEN¹; Chien-Lun CHEN²; ¹Chang Gung University, TAOYUAN, TAIWAN; ²Chang Gung Memorial Hospital, Taoyuan, TAIWAN**

TP 087 **Proteome Analysis and Evaluation of *Bacillus amyloliquefaciens* and *Bacillus subtilis* Secretomes; Maria Claret B. Lauan¹; Ilyn Lyzette D. Santos²; Sun Min Park²; Jinkyu Lim¹; ¹Kyungpook University, Daegu, South Korea; ²Kyungpook National University, Daegu, SOUTH KOREA**

TP 088 **Exploring Biomarkers in Rat Urine for α -Naphthylisothiocyanate Induced Cholestasis; Jianzhong Chen^{1,3}; Rhonda L. Pitsch¹; Nicholas J. DelRaso²; Kari Green-church³; John J. Schlager²; Pavel Shiyyanov¹; ¹Henry M. Jackson Foundation/Air Force**

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TP 089 **Research Lab, Dayton, OH; ²Air Force Research Lab, Dayton, OH; ³The Ohio State University, Columbus, OH**
Novel Strategies in Peptidomics for Osteoarthritis Biomarker Discovery; Jurre Kamphorst^{1,3}; Rob van der Heijden¹; Jeroen DeGroot²; Theo Reijmers¹; Ubbo Tjaden¹; Jan Van Der Greef^{1,2}; Thomas Hankemeier^{1,3}; ¹Division of Analytical Biosciences, LACDR, Leiden, The Netherlands; ²TNO Quality of Life, Zeist, The Netherlands; ³Centre for Medical Systems Biology, Leiden, The Netherlands

TP 090 **Selection and Validation of Liver Cancer Biomarker Candidates from Human Plasma Proteome;** Ju Yeon Lee¹; Jin young Kim¹; Jeong Hwa Lee¹; Gun Wook Park¹; Kyung-Hoon Kwon¹; Young Ki Paik²; Jong Shin Yoo¹; ¹Korea Basic Science Institute, Deajeon, South Korea; ²Yonsei Proteome Research Center, Yonsei University, Seoul, South Korea

TP 091 **Global Phospho-Proteomics Screens to Define 14-3-3 Protein Targets of Specific Cell Signalling Pathways;** Silvia Synowsky; Sandra Crowther; Carol MacKintosh; Medical Research Council-PPU, Dundee, UK

TP 092 **The SILAC Zebrafish Project;** Ann Westman-Brinkmalm¹; Alexandra Abramsson¹; Chen Gang²; Malin E Andersson¹; Gunnar Brinkmalm¹; Josef Pannee¹; Mikael K Gustavsson¹; Kaj Blennow¹; Ulla Rüetschi¹; Hermann Heumann²; Henrik Zetterberg¹; ¹University of Gothenburg, Molndal, Sweden; ²Silantes, Martinsried, Germany

TP 093 **In vivo Characterization of Endogenous Neuropeptides and -Proteins on a Chromatographic Time-scale Using Nanoflow LC/FTICR-MS/MS;** Gunnar Brinkmalm; Erik Portelius; Annika Öhrfelt; Henrik Zetterberg; Ann Westman-Brinkmalm; Kaj Blennow; University of Gothenburg, Molndal, Sweden

TP 094 **Quantitative MALDI-FT-ICR Analysis of Cerebrospinal Fluid of Relapsing Remitting and Primary Progressive Multiple Sclerosis Patients;** Marcel P Stoop; Mark K Titulaer; Peter C Burgers; Christoph Stingl; Peter A E Sillevius Smitt; Rogier Q Hintzen; Theo M Luider; ErasmusMC, Rotterdam, Netherlands

TP 095 **Diagnosis of Prenatal Disorders – the Search for Biomarkers in Maternal Human Plasma Using a Robust Analytical Approach;** Susan E. Slade¹; Konstantinos Thalassinos¹; Nisha Patel¹; Joanne B. Connolly²; Chris Hughes²; Jim Langridge³; Steve Thornton¹; Kypros Nicolaides⁴; James Scrivens¹; ¹University of Warwick, Coventry, UK; ²Waters, Manchester, UK; ³Waters Corporation, Manchester, UK; ⁴King's College Hospital, London, UK

TP 096 **ProteoMiner™ Treatment Combined to Mass Spectrometry Analysis for Biomarker Discovery: Evaluation on Human Plasma;** Damien Lavigne¹; Jean Pierre Le Caer²; Olivier Meilhac³; Jeannette Fareh¹; Luc Guerrier⁴; Thibaut Léger³; Jean Baptiste Michel³; Egisto Boschetto⁴; Olivier Laprévote^{3,5}; ¹Sysdiag, Montpellier, France; ²CNRS-ICSN, Gif Sur Yvette, France; ³Inserm U698, Paris, France; ⁴Bio-Rad, Gif sur Yvette, France; ⁵Paris Descartes University, Paris, France

TP 097 **Protein Expression in Human Female Parotid Saliva is Age Specific;** Kiran S Ambatipudi¹; Bingwen Lu²; John Yates²; James E Melvin¹; ¹University of Rochester, Rochester, NY; ²The Scripps Research Institute, La Jolla, CA

TP 098 **Proteolytic Peptides as Potential Biomarkers for α -Thalassemia with Stop Codon Mutations;** Duangmanee Sanmun¹; Jing Y. Chia¹; Robin Philp²; Bin Li¹; Thongperm Munkongdee³; Saovaros Svasti³; Pranee Winichagoon³; Suthat Fuchareon³; Hai Y. Law⁴; Angeline Lai⁴; Ivy Ng⁴; Kai Tang¹; ¹Nanyang Technological University, Singapore, Singapore; ²Agilent Technologies Singapore Pte Ltd, Singapore, Singapore; ³Mahidol University, Puttamonthon, Thailand; ⁴KK Women's and Children's Hospital, Singapore, Singapore

TP 099 **Identification of Potential Biomarkers in Low Molecular Weight Human Serum Fraction for Hepatocellular Carcinoma Detection Using Proteomic Strategies;** Yanming An; Christopher Loffredo; Habtom Ressom; Radoslav Goldman; Georgetown University Hospital, Washington, DC

TP 100 **Quantitative Proteomic Analysis of Parental and adh1 Mutant Isolates of *Candida albicans* in Mature Phase Biofilm;** Ali A. Lattif^{2,3}; Pranab K. Mukherjee^{2,3}; Elizabeth Yohannes^{1,3}; Hong Zhao^{1,3}; Mark Chance^{1,3}; Mahmoud A. Ghannoum^{2,3}; ⁷Center for Proteomics, Cleveland, OH; ²Center for Medical Mycology, Dept. of Dermatology, Cleveland, OH; ³Case Western Reserve University, Cleveland, OH

TP 101 **Lectins Based Identification of Cancer Associated Glycoproteins in Cancer Patient Plasma;** Qiang Gao; Dawn Watson; Catherine P Riley; Wonryeon Cho; Jiri Adamec; Fred E Regnier; Purdue University, West Lafayette, IN

TP 102 **Proteomic Analysis of Co-Regulators in a Novel Prostate Cancer Progression Line;** John Lapek; Michael Moses; Katherine Marshall; Kevin Welle; Lauren Jensen; Karin Williams; William Ricke; Alan Friedman; University of Rochester Medical Center, Rochester, NY

TP 103 **Discovery of Biomarkers in Patients with Visceral Leishmaniasis;** Manfred Fussi; Brian J. Ward; Momar Ndao; Christine Straccini; Bernard F. Gibbs; McGill University, Montreal, Canada

METABOLOMICS, 104 - 120

TP 104 **Quantitative Phosphorus Metabolomics Using Nano-Flow Liquid Chromatography-Tandem Mass Spectrometry and Culture-Derived Comprehensive Global Internal Standards;** Taisuke Uehara^{1,2}; Akira Yokoi¹; Ken Aoshima^{1,2}; Satoshi Tanaka^{1,2}; Tadashi Kadowaki¹; Masayuki Tanaka¹; Yoshiya Oda^{1,2}; ¹Eisai, Tsukuba, JAPAN; ²CREST, Saitama, Japan

TP 105 **Metabolomics of Soybean Root Hairs Inoculated with *Bradyrhizobium japonicum*;** Zhentian Lei¹; Laurent Brechenmacher²; Seth Findley²; Marc Libault²; Gary Stacey²; Lloyd W. Sumner¹; ¹The Samuel Roberts Noble Foundation, Ardmore, OK; ²University of Missouri, Columbia, MO

TP 106 **Oxidative Metabolism Drives Stem Cell Differentiation;** Oscar Yanes; Julie Clark; Diana Wong; Paul H Benton; Sunia Trauger; Caroline Desponts; Sheng Ding; Gary Siuzdak; The Scripps Research Institute, La Jolla, CA

TP 107 **Differential ¹³C-/¹²C-Isotope Dansylation Labeling and Fast LC FT-ICR MS for Quantitative Metabolome Analysis;** Kevin Guo; Liang Li; University of Alberta, Edmonton, Canada

TP 108 **Evaluation of the Cellodextrin Profiles of the Enzymatic Digests of Switchgrass;** Bruce A. Tomkins; Gary J. Van Berkel; Timothy J. Tschaplinski; Nancy L. Engle; Oak Ridge National Laboratory, Oak Ridge, TN

TUESDAY POSTERS

TP 109	Identification of Biomarkers in Biofluids: Introduction of a Comprehensive Analytical Strategy Based on LC-MS/(MS) and Candidate Confirmation Tools; <u>Rayane Mohamed</u> ¹ ; Emmanuel Varesio ¹ ; Ron Bonner ² ; Gerard Hopfgartner ¹ ; ¹ <i>University of Geneva, Geneva, Switzerland;</i> ² <i>MDS Analytical Tec, Scieux, Concord, ON</i>	TP 120	Optimisation of a Method for Metabolomic Analysis of Tissue Culture and Plasma Using a UHPLC/QTOF System; <u>Florence Raynaud</u> ¹ ; Rupinder Pandher ¹ ; Celine Dueruix ¹ ; Edgar Naegele ² ; ¹ <i>The Institute of Cancer Research, Sutton, UK;</i> ² <i>Agilent Technologies, Waldbronn, Germany</i>
TP 110	A generic Calibration Method to Improve Data Precision and Accuracy in Label Free Metabolomics, a First Step Towards Quantitative Metabolomics; <u>Elwin Verheij</u> ; Frans van der Kloet; Renger Jellema; Ivana Bobeldijk; <i>TNO Quality of Life, Zeist, Netherlands</i>	TP 121	PROTEOMICS: NEW APPROACHES, 121 - 149
TP 111	Application of Supercritical Fluid Technologies to Profiling of Various Lipophilic Metabolites; <u>Takeshi Bamba</u> ; Atsuki Matsubara; Eiichiro Fukusaki; <i>Graduate School of Engineering, Osaka University, Suita, Osaka, Japan</i>	TP 122	Microwave Assisted Chemical and Enzymatic Proteolysis for Mass Spectrometric Identification of Protein Variants; <u>Asif Alam</u> ^{1,2} ; Yuanzhong Yang ² ; Reinhard I. Boysen ² ; Donald K. Bowden ³ ; Milton T. W. Hearn ² ; ¹ <i>Biochemistry & Molecular Biology, Monash University, Vic, Australia;</i> ² <i>ARC Special Research Centre for Green Chemistry, Monash University, Vic, Australia;</i> ³ <i>Thalassaemia Service, Monash Medical Centre, Clayton, Victoria, Australia</i>
TP 112	A Novel Method for Robust LC/MS-TOF Analysis of Hydrophilic Metabolite Classes by Aqueous Normal Phase on a Silica Hydride-Based Column; Joseph J. Pesek ¹ ; Maria Matyska ¹ ; <u>William Ciccone</u> ² ; Steven M. Fischer ³ ; Theodore R. Sana ³ ; ¹ <i>San Jose State University, San Jose, CA;</i> ² <i>Microsolv Technologies, Eatontown, NJ;</i> ³ <i>Agilent Technologies, Santa Clara, CA</i>	TP 123	Lys-N: A novel Protease Ideal, in Combination with SCX and ETD, for Proteomics; <u>Nadia Taouatas</u> ; A.F. Maarten Altelaar; Madalina M. Drugan; Andreas O. Helbig; Albert J.R. Heck; Shabaz Mohammed; <i>Utrecht University, Utrecht, Netherlands</i>
TP 113	LC/MS-TOF Analysis of Metabolites in Plasmodium Falciparum-Infected Red Blood Cells (RBCs) Exposed to the Cell Membrane Permeabilization Agent Streptolysin O; <u>Theodore R. Sana</u> ¹ ; Steven M. Fischer ¹ ; William L. Gosnell ² ; Abby Collier ² ; Sandra Chang ² ; ¹ <i>Agilent Technologies, Santa Clara, CA;</i> ² <i>John A. Burns School of Medicine, Honolulu, HI</i>	TP 124	Proteome Analysis by an On-Target Digestion MALDI- FTICR Approach; <u>Chunyan Li</u> ¹ ; Peng Zhao ¹ ; Lance Wells ² ; Jon Amster ¹ ; ¹ <i>University of Georgia, Athens, GA;</i> ² <i>CCRC/UGA, Athens, GA</i>
TP 114	Metabolic Profiling of a Single Live Cells by Laser Ablation Electrospray Ionization Mass Spectrometry; <u>Bindesh Shrestha</u> ; Akos Vertes; <i>George Washington University, Washington, DC</i>	TP 125	On-Substrate Labeling of Peptides Using Cleavable Fluorous Labels Immobilized on Fluorous Silica Support; <u>Manoj Pal</u> ^{1,2} ; Bruhaspathy Miriyala ² ; Marvin S. Yu ² ; Eric C. Peters ¹ ; ¹ <i>GNF (Novartis), San Diego, CA;</i> ² <i>Fluorous Technologies Inc., Pittsburgh, PA</i>
TP 115	Toward Simultaneous Determination of Ionic Metabolites by Capillary Electrophoresis-Mass Spectrometry; <u>Yoshiaki Ohashi</u> ¹ ; Takushi Ooga ¹ ; Hajime Sato ¹ ; Atsushi Nagashima ¹ ; Masaru Tomita ^{1,2} ; Tomoyoshi Soga ^{1,2} ; ¹ <i>Human Metabolome Technologies, Inc., Tsuruoka, Japan;</i> ² <i>Institute for Advanced Biosciences, Keio University, Tsuruoka, Japan</i>	TP 126	Ultra-Rapid Pressure Digestion and Label-Free Quantitative Proteomics of <i>Yersinia</i> Infected Mice Tissues; <u>Kim K. Hixson</u> ¹ ; Daniel Lopez Ferrer ¹ ; Matthew Bender ² ; Patricia L. Worsham ³ ; Karl K. Weitz ¹ ; Nate Lawrence ⁴ ; Amy Rasley ⁵ ; Therese W. Clauss ¹ ; Ljiljana Pasa-tolic ¹ ; Richard D. Smith ¹ ; Mary S. Lipton ¹ ; ¹ <i>Pacific Northwest National Lab, Richland, WA;</i> ² <i>NBACC, Washington, DC;</i> ³ <i>USAMRIID, Frederick, MD;</i> ⁴ <i>Pressure Biosciences, Inc., South Easton, MA;</i> ⁵ <i>Lawrence Livermore National Lab, Livermore, CA</i>
TP 116	Pathway Identification by ¹³C Metabolomics Using Liquid Chromatography High-Resolution Mass Spectrometry: Elucidation of the Ethylmalonyl-CoA Pathway for Glyoxylate Regeneration; <u>Patrick Kiefer</u> ¹ ; Rémi Peyraud ¹ ; Philipp Christen ¹ ; Jean-Charles Portais ² ; Julia A. Vorholt ¹ ; ¹ <i>Swiss Federal Institute of Technology, Zurich, Switzerland;</i> ² <i>LISBP, INSA, Toulouse, France</i>	TP 127	Use of Proteinase K to Improve Resolution in Hydrogen/Deuterium Exchange Mass Spectrometry; <u>John Venable</u> ; Linda Okach; William Scuba; Ansgar Brock; <i>Genomics Institute for the Novartis Research Found, San Diego, CA</i>
TP 117	Study of Metabolites Including α-Tomatine by Femtosecond Laser-Induced Ionization/Dissociation (fs-LID); <u>Nelson S. Winkler</u> ; Christine L. Kalcic; A. Daniel Jones; Marcos Dantus; <i>Michigan State University, East Lansing, MI</i>	TP 128	A Comparison of Proteolytic Digestion Techniques on Different Sample Formats; <u>Tommy K. Cheung</u> ; Teerapat Rosajjakul; David Arnott; Qui Phung; <i>Genentech, Inc., South San Francisco, CA</i>
TP 118	Biomarker Discovery in Diabetic Nephropathy by Targeted Metabolomics; <u>Ulrika Lundin</u> ; Klaus M. Weinberger; <i>Biocrates Life Sciences AG, Innsbruck, Austria</i>	TP 129	Optimization of Microwave-Assisted Proteolysis for Highly Efficient and More Comprehensive Protein Profiling; <u>Yi Huang</u> ^{1,2} ; Fang Xu ^{1,3} ; Sun Yong Jeong ¹ ; Yanbao Yu ^{1,2} ; Xian Chen ¹ ; ¹ <i>University of North Carolina, Chapel Hill, NC;</i> ² <i>Fudan University, Shanghai, China;</i> ³ <i>Jiaotong University, Shanghai, China</i>
TP 119	Improving the Analytical Strategies for LC-MS of Polar Metabolites; <u>Thomas Hankemeier</u> ^{1,2} ; Toshi Mikami ¹ ; Miguel Rojas ^{1,2} ; Rob Vreeken ^{1,2} ; Theo Reijmers ^{1,2} ; ¹ <i>Leiden University, Leiden, Netherlands;</i> ² <i>Netherlands Metabolomics Centre, Leiden, The Netherlands</i>	TP 130	Proteomics Under Pressure: Rapid Extraction and Digestion in a Single Tube; <u>Alexander V. Lazarev</u> ¹ ; Emily Freeman ² ; Vera S. Gross ¹ ; Greta Carlson ¹ ; Edmund Ting ¹ ; Alexander R. Ivanov ² ; ¹ <i>Pressure BioSciences, Woburn, MA;</i> ² <i>Harvard School of Public Health, Boston, MA</i>
			'Genome Free' Proteomics; de novo Sequence Analysis by a Combination of LysN Protein Digestion and Electron Transfer Dissociation; <u>A.F. Maarten Altelaar</u> ^{1,2} ; Madalina M. Drugan ^{1,2} ; Nadia Taouatas ^{1,2}

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TP 131 Nikolai Mischerikow^{1,2}; Bas van Breukelen^{1,2}; Shabaz Mohammed^{1,2}; Albert J.R. Heck^{1,2}; ¹*Utrecht University, Utrecht, Netherlands*; ²*Netherlands Proteomics Centre, Utrecht, The Netherlands*

TP 131 **An Efficient On-pellet-Digestion Procedure Coupled to Extensive Nano-LC Separation/ Orbitrap for Comprehensive and Large-scale Profiling of Swine Heart Mitochondrial Proteome;** Jun Qu^{1,2}; John Canty^{1,2}; Rebecca Young^{1,2}; Xiaotao Duan^{1,2}; Robert Straubinger^{1,2}; ¹*University at Buffalo, SUNY, Amherst, NY*; ²*New York State Center of Excellence, Buffalo, NY*

TP 132 **High-Pressure Assisted In-Gel Tryptic Digest: Qualitative and Quantitative Aspects;** Michail Alterman¹; Melkamu Getie-Kebtue¹; Alexander Lazarev²; Vera S. Gross³; ¹*FDA, CBER, Rockville, MD*; ²*Pressure Biosciences, Inc, Woburn, MA*; ³*Pressure BioSciences, Woburn, MA*

TP 133 **A Novel Target Peptide Quantification Method: Multiple Products Monitoring (MpM);** Je-Hyun Baek¹; Hokeun Kim¹; Byunghee Shin¹; Sun Young Ahn²; Youngmi Kim Pak²; Myeong-Hee Yu^{*1}; ¹*FPC at KIST, Seoul, South Korea*; ²*Kyung Hee University, Seoul, South Korea*

TP 134 **Quantitative Cell Surface Proteome Profiling of the Human Pathogen *Staphylococcus aureus* AsigB Using the Biotinylation Approach;** Kristina Hempel; Andreas W. Otto; Michael Hecker; Dörte Becher; *University of Greifswald, Greifswald, Germany*

TP 135 **Determination of the Number of Apolipoprotein Molecules in Reconstituted High Density Lipoprotein Complexes Using MALDI-MS;** R.A. Gangani D. Silva²; John B. Massey³; Henry Pownall³; Mattew R. Tubb²; Jamie Morris²; Larry Sallans¹; Stephen F. Macha¹; ¹*University of Cincinnati, Department of Chemistry, Cincinnati, OH*; ²*Department of Pathology and Laboratory Medicine, University of Cincinnati, OH*; ³*Department of Medicine, Baylor College of Medicine, Houston, TX*

TP 136 **Determination of Cancer Biomarkers Using Targeted MS Analysis of Isotope-Labeled Formalin-Fixed Paraffin-Embedded Tissue Samples;** Leroi V. Desouza¹; Marlene M. Darfler²; David B. Krizman³; Casimir Eitner⁴; Alexander D. Romaschin⁵; Terence J. Colgan⁶; K W Michael Siu¹; ¹*York University, Toronto, Canada*; ²*Expression Pathology Inc., Gaithersburg, MD*; ³*Expression Pathology Incorporated, Gaithersburg, MD*; ⁴*Expression Pathology, Inc., Gaithersburg, MD*; ⁵*St Michael's Hospital, Toronto, Canada*; ⁶*Mt. Sinai Hospital, Toronto, Canada*

TP 137 **A Comparison of Proteins and Their Expression Levels within Different Regions of Multi-Cellular Spheroids (MCTS);** Chris Sutton; Kelly McMahon; Roger M. Phillips; *Institute of Cancer Therapeutics, Bradford, UK*

TP 138 **Novel High-Throughput SRM (/MRM) Based Proteomic Strategy;** Bruno Domon¹; Paola Picotti¹; Nathalie Selevsek¹; Reiko Kiyonami²; Alan E. Schoen²; Amol Prakash²; Scott Peterman²; Andreas F Huhmer²; Ruedi Aebersold¹; ¹*ETH Zurich, Zurich, Switzerland*; ²*ThermoFisher Scientific, San Jose, CA*

TP 139 **Quantitative Proteomic Analysis of Syk-Interacting Protein Complexes Using Novel Labeling Reagents and a Single-Chain Anti-GFP Antibody;** Jacob A. Galan^{1,3}; Leela L. Paris^{2,3}; Hua-Jie Zhang^{1,3}; Robert L. Geahlen^{2,3}; W. Andy Tao^{1,3}; ¹*Dept of Biochemistry, Purdue University, West Lafayette, IN*; ²*Dept of Medicinal Chemistry, Purdue University, West Lafayette, IN*; ³*Purdue Cancer Center, West Lafayette, IN*

TP 140 **PAcIFIC: How to Quantify Deeper Into the Proteomics Ocean;** Alexandre Panchaud; Scott A. Shaffer; David R. Goodlett; *University of Washington, Seattle, WA*

TP 141 **Rapid, Near Proteome-Wide Quantitative Analysis of Aneuploid Budding Yeast;** Noah E. Dephoure¹; Eduardo M. Torres²; Judit Villen¹; Angelika Amon²; Steven Gygi¹; ¹*Harvard Medical School, Boston, MA*; ²*Howard Hughes Medical Institute, MIT, Cambridge, MA*

TP 142 **Subunit Stoichiometry and Absolute Quantification of Protein Complexes Using an Integrated Bottom Up Approach;** Lan Huang¹; Yingying Yang¹; Yimeng Dou²; Jenny Wu²; Lei Fang¹; Rick Lathrop^{1,2}; Wes Hatfield^{1,2}; Ruslan Aphasizhev¹; Xiaojie Qi¹; Suzanne Sandmeyer¹; ¹*University of California, Irvine, CA*; ²*CODA Genomics, Inc, Laguna Hills, CA*

TP 143 **Chemoproteomics Technology for Target Protein Profiling and its Applications for Drug Discovery;** Hua Tang; Scott Warder; Paul Richardson; Robert Hubbard; Michael Michaelides; Todd Hansen; Shaun McLoughlin; *Abbott laboratories, Abbott Park, IL*

TP 144 **Functionalized Nano-chemical Probes for Resolving Protein Complexes Related to Estrogen Action Using MS-Based Quantitative Proteomics;** Pai-Chiao Cheng; Hsiang-Kai Chang; Shu-Hui Chen; *National Cheng Kung University, Tainan, Taiwan*

TP 145 **CCMS – A Unique Technology Enabling Improved In-Depth Proteomic Analysis and Drug Development Through Functional Isolation of Sub-Proteomes;** Mirko Glinski¹; Thomas Lenz¹; Yan Luo¹; Peter Poot²; Christian Blex¹; Olivia Baessler¹; Jenny J. Fischer¹; Christian Dalhoff¹; Michael Hueben²; Elmar Weinhold²; Mathias Dreger¹; Michael Sefkow¹; Hubert Koester¹; ¹*caprotec bioanalytics GmbH, Berlin, Germany*; ²*RWTH Aachen, Aachen, Germany*

TP 146 **Identification of HuD Specific Antibodies Related to Paraneoplastic Neurological Syndrome by Advanced Mass Spectrometry;** Lennard Dekker; Peter Maat; Eric Brouwer; Theo Luider; Peter Sillevis Smitt; *Erasmus Medical Center, Rotterdam, Netherlands*

TP 147 **Deciphering the Dynamic Structure and Function of the 26S Proteasome Complex Upon Oxidative Stress;** Xiaorong Wang; Lan Huang; *University of California, Irvine, CA*

TP 148 **Dissection of the MAPK Signal Cascades Using *in vivo* Profiling Endogenous Interactions with Knock-out (iPEIK) in Mammalian Cells;** Ling Xie; linhong Jing; Yu Yanbao; Kazuhiro Nakamura; Gary L Johnson; Xian Chen; *University of North Carolina, Chapel Hill, NC*

TP 149 **Identification of a Viral Protein that Inhibits Insulin Receptor Activation – a Slow, Deliberate, Massively Serial Analysis of Viral Interactomes;** Richard S. Johnson; Refugio Martinez; Stefan Ponko; Steve Wiley; Kaykas Ajamete; *VLST Corp, Seattle, WA*

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SMALL SCALE SEPARATIONS, 150 - 173	
TP 150	Top Down Proteomics Using Online Polymer Reversed Phase (PLRP) Nanocapillary-LC Coupled Fourier Transform Mass Spectrometry; <u>Adaikkalam Vellaichamy</u> ¹ ; John Kellie ¹ ; John C. Tran ¹ ; Ji Eun Lee ¹ ; Jaeyun Sung ¹ ; Nathan D. Price ¹ ; Gary Valaskovic ² ; Neil L. Kelleher ¹ ; ¹ Universit of Illinois, Urbana, IL; ² New Objective, Inc., Woburn, MA
TP 151	Comparison of Chromatographic Media for Nano ESI LC-MS/MS: Applications to Biomarker Discovery; <u>Michael Gardner</u> ¹ ; Megan Rowland ² ; Jonathan L. Bundy ¹ ; James Stephenson ¹ ; Gary Valaskovic ³ ; Mike S. Lee ⁴ ; ¹ Research Triangle Institute, Rtp, NC; ² RTI International, Cary, NC; ³ New Objective, Inc., Woburn, MA; ⁴ Milestone Development Services, Newtown, PA
TP 152	High Resolution Dual Nano-LC/MS Source for Increasing Sample Throughput of Gradient LC Methods; <u>Arthur J. Fogiel</u> ; Arthur J. Fogiel Jr; Sau Lan Tang Staats; Katherine Heaton; Lee Heineman; <i>Phoenix S & T, Inc, Chester, PA</i>
TP 153	Optimal Approach for Multiplexed NanoLC-MS; <u>Sau Lan Tang Staats</u> ; Arthur Fogiel; Andris Suna; Arthur Fogiel, Jr; Katherine Heaton; <i>Phoenix S & T, Inc, Chester, PA</i>
TP 154	Automated 2D Peptide Separation on a 1D Nano-LC-MS System; Paul Taylor ² ; Peter Nielsen ³ ; Morten B Trelle ³ ; Ole Hørning ³ ; <u>Michael Barrett Andersen</u> ³ ; Ole Vorm ³ ; Michael Moran ² ; Thomas Kislinger ¹ ; ¹ University of Toronto, Toronto, ON; ² Hospital for Sick Children, Toronto, ON; ³ Proxeon, Odense, Denmark
TP 155	An Investigation into the Reproducibility of LC-MS Analysis of Complex Peptide Mixtures Using Formalin-Fixed Paraffin-Embedded (FFPE) Tissue; <u>Chris Hughes</u> ¹ ; Thérèse Mckenna ¹ ; Jim Langridge ¹ ; Niroshini Nirmalan ² ; Rosamonde Banks ² ; ¹ Waters Manchester UK, Manchester, UK; ² University of Leeds, Leeds, UK
TP 156	Ruggedness of Nanobore LCMS for Qualitative and Quantitative Biomarker Analysis Using an Automated Emitter Positioning and Rinsing System; <u>Amanda Berg</u> ; Carla Marshall-Waggett; Gary Valaskovic; <i>New Objective, Inc., Woburn, MA</i>
TP 157	Improved Throughput for Clinical Proteomics Using a Dual Channel NanoLC-Nanospray Source; <u>Cheryl F. Lichten</u> ¹ ; Ben Ngo ² ; Marjorie A. Case ¹ ; R. Reid Townsend ¹ ; Gary A. Valaskovic ² ; ¹ Washington University School of Medicine, St. Louis, MO; ² New Objective, Inc., Woburn, MA
TP 158	Reduced Carry-Over, Fast Nanoflow LC/MS Using a Parallel Analysis / Wash Approach; <u>Tom Van De Goor</u> ; Lukas Trojer; Hans-Georg Weissgerber; <i>Agilent Technologies, Waldbronn, Germany</i>
TP 159	Increased Peak Capacity for Nano HPLC Separation of Peptides by Using Long Packed Columns; Goran Mitulovic ¹ ; Sebastiaan Eeltink ³ ; Remco Swart ³ ; <u>Mark van Gils</u> ² ; Karl Mechtl ⁴ ; ¹ IMBA Inst. of Mol. Biotech., Vienna, Austria; ² Dionex, Sunnyvale, CA; ³ Dionex Benelux, Amsterdam, The Netherlands; ⁴ IMP Research Institute of Mo, Vienna, AUSTRIA
TP 160	Comparison of Conventional, Sub-2-um, and Superficially Porous (Fused-Core) Particles for Long and Short Gradient Nanobore LC/MS; <u>Robert Moody</u> ¹ ; Gary Valaskovic ² ; Mike S. Lee ³ ; ¹ MAC-MOD Analytical, Chadds Ford, PA; ² New Objective, Inc.,
TP 161	<i>Woburn, MA; ³Milestone Development Services, Newtown, PA</i>
TP 162	Temperature Control Effects in Packed Emitter Nanobore LC-MS/MS for Protein Digest Analysis; <u>Mike S. Lee</u> ¹ ; Lee Sawdey ² ; Amanda Berg ² ; Gary Valaskovic ² ; ¹ Milestone Development Services, Newtown, PA; ² New Objective, Inc., Woburn, MA
TP 163	The Effect of Chromatographic Resolution on Peptide Identification; <u>Remco Van Soest</u> ; David Neyer; J. Bryce Young; <i>Eksigent Technologies, Dublin, CA</i>
TP 164	Measurement of Melamine in Dog Plasma by Direct Injection Using Nano-Pump Switching Nanospray Tandem Mass Spectrometry (MS/MS); <u>Daniel Magiera</u> ¹ ; Gary Valaskovic ² ; Mike S. Lee ³ ; ¹ Molecular MS Diagnostics, Cranston, RI; ² New Objective, Inc., Woburn, MA; ³ Milestone Development Services, Newtown, PA
TP 165	High Voltage Programming for Optimum MS/MS Sensitivity of Neuropeptides; <u>David P. Budac</u> ¹ ; Mark J. Hayward ² ; Arthur Fogiel ³ ; ¹ Lundbeck Research US, Paramus, NJ; ² Lundbeck Research USA, Stockton, NJ; ³ Phoenix S&T, Chester, PA
TP 166	Nano LCMS with Simultaneous Low Volume Fractionation Followed by Low Flow Infusion for the Analyses of Complex Proteomic Samples; <u>Reinaldo Almeida</u> ² ; Leonie F. Waanders ¹ ; Peter Bandila ¹ ; Mark Allen ² ; Matthias Mann ¹ ; ¹ Max Planck Institute for Biochemistry, D Martinsried, Germany; ² Advin Biosciences Ltd, Norwich, Norfolk, UK
TP 167	EWOD Digital Microfluidic Platform for Protein Capture and Analysis; Adam A. Stokes; Yifan Li; William Parkes; David J Clarke; Pat Langridge Smith; Anthony J. Walton; <u>C. Logan Mackay</u> ; <i>University of Edinburgh, Edinburgh, UK</i>
TP 168	Gangliosides Analysis by Capillary Electrophoresis/Electrospray Ionization/Mass Spectrometry Using Nonvolatile Borate Buffer; <u>Ju-Li Huang</u> ; Yun-Hung Hsueh; Guor-Rong Her; <i>National Taiwan University, Taipei, Taiwan</i>
TP 169	Comprehensive LC-CE-MS with Capillary Chromatography Coupled to a Microfabricated Device with Integrated Lossless Sample Transfer, Electrophoretic Separation, and Electrospray Ionization; <u>J. Scott Mellors</u> ; J. Michael Ramsey; <i>University of North Carolina, Chapel Hill, NC</i>
TP 170	Step Elution SPE Multichannel CE-MS: A High Throughput Two-dimensional Separation Approach for Protein Analysis; Wei-Han Lee; <u>Guor-rong Her</u> ; <i>National Taiwan University, Taipei, Taiwan</i>
TP 171	Reversed Phase Monolithic Column Array Devices for Analysis of Peptide Mixtures; <u>Jian Liu</u> ; Daniel Higbee; Michael Schilling; Ranu Nayak; Daniel R. Knapp; <i>Medical University of SC, Charleston, SC</i>
TP 172	High Capacity Separations for Complex Proteomic Mixtures Using Multiple Microfluidic Chip Columns in Series; <u>J. Bryce Young</u> ; David Wyrick; Erika Lin; Remco van Soest; Nicole Hebert; <i>Eksigent Technologies, Dublin, CA</i>
TP 173	Profiling Stress-Induced Neuropeptidomic Changes with Capillary Electrophoresis-Mass Spectrometry and Stable Isotopic Labeling Technique; <u>Junhua Wang</u> ; Feng Xiang; Yuzhuo Zhang; Zichuan Zhang; Lingjun Li; <i>UW-Madison, Madison, WI</i>
	Application and Evaluation of Porous Tip CE-MS Interface Design to Narrow Bore (~5 μm) CE

TUESDAY POSTERS

Capillaries; Mehdi Moini¹; Michelle Hentz¹; Emily Chen²; ¹Texas State University, San Marcos, TX; ²University of Texas at Austin, Austin, TX

IMAGING MS: INSTRUMENTATION AND METHOD DEVELOPMENT, 174 - 202

TP 174 **Principal Component Analysis (PCA) Applied to MALDI-MS Images, Unsupervised Data Interrogation Directing Peptide Selection from Trypsin-Digested Tissue Sections**; Emrys A Jones¹; Adam McMahon¹; Alex Henderson¹; Herve Boutin¹; Emmanuel Raptakis²; Patricia Price¹; ¹University of Manchester, Manchester, UK; ²Kratos Analytical, Manchester, UK

TP 175 **Locating Spatially-Localized Molecules in MALDI-Images**; Jocelyne Bruand¹; Maxence Wisztorski²; Isabelle Fournier³; Michel Salzet⁴; Eduardo R. Macagno¹; Vineet Bafna⁵; ¹UCSD, La Jolla, CA; ²University of Lille 1, Villeneuve D'ascq, France; ³University of Lille 1, FRE-C, Villeneuve D'ascq Cedex, France; ⁴FRE-CNRS 2933, University, Villeneuve D'ascq Cedex, France; ⁵Univ. Cal. San Diego, San Diego, CA

TP 176 **Imaging mzML (imzML) – a Common Data Format for Imaging Mass Spectrometry**; Andreas Roempp¹; Thorsten Schramm¹; Ivo Klinkert²; Alfons Hester¹; Jean-Pierre Both³; Marc Brulet⁴; Alain Brunelle⁴; Olivier Laprevote^{4,5}; Ron M.A. Heeren²; Markus Stoeckli⁶; Bernhard Spengler¹; ¹Justus Liebig University, Giessen, Germany; ²FOM Inst. Atomic/Molecular Physics, Amsterdam, Netherlands; ³CEA, Saclay, France; ⁴ICSN - CNRS, Gif Sur Yvette, France; ⁵Paris-Descartes University, Paris, France; ⁶Novartis Institutes for BioMedical Research, Basel, Switzerland

TP 177 **Automated Classification and Grading of Tumors in Mass Spectrometric Images Using Postprocessed Random Forests**; Michael Hanselmann¹; Ullrich Köthe¹; Marc Kirchner¹; Bernhard Y. Renard¹; Erika R. Amstalden²; Kristine Glunde³; Ron M.A. Heeren²; Fred A. Hamprecht¹; ¹University of Heidelberg, Heidelberg, Germany; ²FOM Inst. Atomic/Molecular Physics, Amsterdam, Netherlands; ³Johns Hopkins University SOM, Baltimore, MD

TP 178 **MALDI Imaging: Interpretation of Gastric Cancer MALDI Images by Hierarchical Clustering**; Arndt Asperger¹; Sören-Oliver Deininger¹; Matthias Ebert²; Michael Becker¹; Arne Fütterer¹; Christoph Röcken³; ¹Bruker Daltonik GmbH, Bremen, Germany; ²Department of Medicine II, Technical University, Munich, Germany; ³Institute of Pathology, Charité Univ. Medicin, Berlin, Germany

TP 179 **A Novel Statistical Approach to the Interpretation of Complete MALDI Mass Spectrometry Imaging Datasets**; Emmanuelle Claude¹; Pr. Chen²; Keith Richardson¹; Thérèse Mckenna¹; Jim Langridge¹; ¹Waters corporation, Manchester, UK; ²Academia Sinica, Taipei, Taiwan

TP 180 **Molecular Classification of Tissue Arrays by Imaging MS**; M. Reid Groseclose¹; Kristina Schwamborn¹; Pierre P. Massion²; Richard M. Caprioli²; ¹Vanderbilt University, Nashville, TN; ²Vanderbilt University School of Medicine, Nashville, TN

TP 181 **3D Imaging Mass Spectrometry...Putting Humpty-Dumpty Together Again**; Erin H. Seeley; Tuhin K. Sinha; Zhengyu Yang; Richard M. Caprioli; Vanderbilt University, Nashville, TN

TP 182 **Imaging Mass Spectrometry in Prostate Cancer - Looking Beyond Histology**; Kristina Schwamborn¹; Reid Groseclose¹; Peter Wild²; Richard M. Caprioli¹; ¹Vanderbilt University, Nashville, TN; ²Institute of Surgical Pathology, Zurich, Switzerland

TP 183 **On-tissue Chemical Derivatization for the Analysis of Drugs by MALDI Imaging MS**; Almary Chacon; Irene Zagol-Ikapitite; Venkataraman Amarnath; John A. Oates; Olivier Boutaud; Richard M. Caprioli; Vanderbilt University, Nashville, TN

TP 184 **Tissue Imaging Using Simultaneous Chemical Derivatization and Desorption Electrospray Ionization**; Chunping Wu; Demian R. Ifa; Nicholas Manicke; R. Graham Cooks; *Purdue University, West Lafayette, IN*

TP 185 **Developments in Instrumentation for Atmospheric Pressure, Nanoscale Chemical Imaging via Tip-Enhanced, Near-Field Desorption/Ionization Mass Spectrometry**; Douglas E. Goeringer; James A. Bradshaw; Kent A. Meyer; Olga S. Ovchinnikova; *Oak Ridge National Laboratory, Oak Ridge, TN*

TP 186 **Towards Nanoscale Molecular Analysis and Chemical Imaging at Atmospheric Pressure by Near Field Laser Ablation Mass Spectrometry: Current Challenges**; Liang Zhu; Gerardo Gamez; Thomas A. Schmitz; Renato Zenobi; *Swiss Federal Institute of Technology, Zurich, Switzerland*

TP 187 **Profiling and Imaging Mass Spectrometry by Probe Electrospray Ionization Using Solid Needle**; Lee Chuin Chen; Zhan Yu; Rikiya Iwata; Hajime Ito; Yutaka Hashimoto; Sen Takeda; Kenzo Hiraoka; *University of Yamanashi, Kofu, Japan*

TP 188 **Development of a Prototype Mass Spectrometer for MS Imaging Using a High Spatial/Temporal Resolution Ion Detector**; Masahiro Hayashi^{1,2}; Yasuhide Naito¹; ¹GPI, Hamamatsu, Japan; ²Hamamatsu Photonics K.K., Hamamatsu, Japan

TP 189 **Quantitative Evaluation of Sensitivity for Microscopic AP-MALDI-MS Imaging in Direct Tissue Analysis**; Takahiro Harada¹; Kazuteru Takahashi¹; Kiyoshi Ogawa¹; Yoshikazu Yoshida¹; Yuki Sugiura²; Takahiro Hayasaka³; Mitsutoshi Setou³; ¹Shimadzu Corporation, Soraku-gun, Japan; ²Tokyo Institute of Technology, Yokohama, Japan; ³Hamamatsu University School of Medicine, Hamamatsu, Japan

TP 190 **Full Integration of Lab-Made DESI-MS Imaging Ion Source into Commercial MALDI-FTICR-MS Imaging System**; Michael Volny¹; Martin Strohalm¹; Veronika Vidova^{1,2}; Gary Kruppa¹; Jaroslav Pol^{1,3}; Petr Novak¹; Vaclav Kobliha¹; Karel Lemr^{1,2}; Vladimir Havlicek^{1,2}; ¹Institute of Microbiology, Prague 4, Czech Republic; ²Palacky University, Olomouc, Czech Republic; ³University of Helsinki, Helsinki, Finland

TP 191 **Tissue Imaging by 5 kHz High-Performance MALDI-TOF**; Christina Vestal¹; Kenneth Parker¹; Kevin Hayden¹; George Mills¹; Marvin Vestal¹; Shannon Cornett²; Richard M. Caprioli³; ¹Virgin Instruments Corp., Sudbury, MA; ²Vanderbilt University, Nashville, TN; ³Vanderbilt Univ Sch of Med, Nashville, TN

TP 192 **Development of New Microscopic Micro-MALDI-Q-FTICR-MS Instrument**; Katsutoshi Takahashi; *Natl Institute Advan. Indus. Sci Tech, Tokyo, Japan*

TP 193 **Measuring Lipid and Peptide Collision Cross Sections Directly from Tissue Using Imaging MALDI Travelling-Wave IM-MS**; Whitney B. Ridenour¹; Michal Kliman²; John A. McLean²; Richard M.

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TP 194 **Caprioli¹; ¹Vanderbilt University Medical Center, Nashville, TN; ²Vanderbilt University, Nashville, TN**
Atmospheric Pressure UV and IR MALDI Imaging Mass Spectrometry for Peptides, Carbohydrates and Small Molecules; Berk Oktem; Thomas D. Saul; Vladimir M. Doroshenko; *MassTech Inc., Columbia, MD*

TP 195 **Enhanced MALDI FTMS Imaging of Drug Metabolism and Targeted Lipids with Gold and Silver Nanoparticle Matrices;** Katherine A. Kellersberger¹; Claire M. Sauvageot²; Santos Kesari²; Steven Oldenburg³; Michael L. Easterling¹; Matt Spencer³; Paul Speir¹; Nathalie Y.R. Agar⁴; ¹Bruker Daltonics, Inc., Billerica, MA; ²Dana Farber Cancer Institute, Harvard Med. School, Boston, MA; ³Nanocomposix Inc., San Diego, CA; ⁴Harvard Medical School, Neurosurgery, Boston, MA

TP 196 **Sub-Cellular Imaging of Neuronal Cells Cultured on Silicon Using Secondary Ion Mass Spectrometry;** Kevin Tucker; Zhen Li; Ann Knolhoff; Stanislav Rubakhin; Jonathan Sweedler; *University of Illinois, Urbana, IL*

TP 197 **A MALDI Matrix Deposition Method for Imaging Mass Spectrometry using Low Volatile Solvent;** Mi Young Ha^{2,3}; Eun-il Park²; Sehwan Moon²; OkPyo Zee³; Yangsun Kim^{1,2}; ¹Hudson surface Technology, Inc., Newark, NJ; ²Applied Surface Technology, Inc., Suwon, Korea; ³College of Pharmacy, Sungkyunkwan University, Suwon, Korea

TP 198 **Targeting of Hypoxia-Related Proteins in AQ4N Treated Solid Tumour Xenografts by MALDI-Ion Mobility Separation- Mass Spectrometry Imaging;** Marie Claude Djidja¹; Emmanuelle Claude²; Paul M. Loadman³; Chris W. Sutton³; Vikki Carolan¹; Malcolm Clench¹; ¹Sheffield Hallam University, Sheffield, UK; ²Waters corporation, Manchester, UK; ³Institute of Cancer Therapeutics, Bradford, UK

TP 199 **3-Dimensional Reconstruction of Breast Tumor Xenografts with Combined Mass Spectrometry Imaging and Magnetic Resonance Spectroscopic Imaging;** Erika R. Amstalden Van Hove¹; Tiffany R. Greenwood²; Ivo Klinkert¹; Kamila Czornak¹; Ron M.A. Heeren¹; Kristine Glunde²; ¹FOM Inst. Atomic/Molecular Phy, Amsterdam, Netherlands; ²Johns Hopkins University SOM, Baltimore, MD

TP 200 **Improved On-Tissue Protein Identification in MALDI Imaging Mass Spectrometry (MSI) Using the Metalloendopeptidase Lys-N;** Kamila Czornak¹; Luke MacAleece¹; Shabaz Mohammed^{2,3}; Albert J.R. Heck^{2,3}; Ron M.A. Heeren¹; A.F. Maarten Altelaar^{2,3}; ¹FOM-Institute for Atomic and Molecular Physics, Amsterdam, The Netherlands; ²Utrecht University, Utrecht, The Netherlands; ³Netherlands Proteomics Centre, Utrecht, The Netherlands

TP 201 **Automated Sample Handling for High Throughput Imaging Mass Spectrometry;** Liam McDonnell; Hans Dalebout; Alexandra van Remortere; René J.M. van Zeijl; André M. Deelder; *LUMC, Leiden, Netherlands*

TP 202 **Animal Tissue Slicing: A Critical Step for Successful MALDI-MS Imaging;** Fangbiao Li¹; Walter Korfischer²; Yunsheng Hsieh²; ¹Schering-Plough Research Institute, Kenilworth, NJ; ²Schering-Plough, Kenilworth, NJ

TP 203 **ION MOBILITY, 203 - 236**
Enhance Sensitivity for Comprehensive Phosphoproteomics Analyses Using High Field

TP 204 **Asymmetric Waveform Ion Mobility Spectrometry and Electron Transfer Dissociation;** Tara L Muratore-Schroeder¹; Eric Bonneil¹; Gaëlle Bridon¹; Julian Saba²; Brenda Kessler²; Pierre Thibault¹; ¹Universite de Montréal, Montréal, QC; ²Thermo Fisher Scientific, San Jose, CA

TP 205 **Towards intracellular Analysis by Laser Desorption-Ion Mobility-oTOFMS;** J. Albert Schultz¹; Thomas Egan¹; Ernest K. Lewis¹; Kelley Waters¹; Valerie Vaughn¹; Valeriy Raznikov²; Jerry F. Moore³; Amina S. Woods⁴; ¹Ionwerks, Inc., Houston, TX; ²Russian Academy of Science, Chernogolovka, Russia; ³MassThink LLC, Naperville, IL; ⁴NIDA-IRP, NIH, Baltimore, MD

TP 206 **Vacuum Ultra Violet Post-Ionization Combined with Ion-Mobility for the Characterization and Application of Functionalized Nanomaterials as MALDI Matrices;** Ernest K. Lewis¹; Thomas Egan¹; Kelley Waters¹; Sandy Yates²; Jerry F. Moore³; Carter Kittrell⁴; Steven R. Ripley⁴; K. Steven Ho⁴; Virginia Womack¹; Robert H. Hauge⁴; Valery N. Khabashesku⁵; Amina S. Woods⁶; J. Albert Schultz¹; ¹Ionwerks, Inc., Houston, TX; ²Bruker Daltonics, Fremont, CA; ³MassThink LLC, Naperville, IL; ⁴Rice University, Houston, TX; ⁵University of Houston, Houston, TX; ⁶NIDA IRP, NIH, Baltimore, MD

TP 207 **Detailed Kinetic Studies of Solution-Phase Protein Unfolding by Time-Resolved ESI and IMS/MS Using a DMA QTOF;** John Van Nostrand¹; Tamanna Rob¹; Bruce Thomson^{1,2}; Derek Wilson¹; K W Michael Siu¹; ¹York University - CRMS, Toronto, Canada; ²MDS Analytical Technologies, Concord, ON

TP 208 **Combining Microfluidic Cell Trapping with Real Time Monitoring of Biomolecular Exudates by Ion Mobility-Mass Spectrometry;** Jeffrey Enders; Sevugarajan Sundarapandian; Kevin Seale; John P. Wikswo; John A. McLean; *Vanderbilt University, Nashville, TN*

TP 209 **Design of a Spherical FAIMS Cell;** Marilyn Prieto; Richard A. Yost; *University of Florida, Gainesville, FL*

TP 210 **Study on Factors Affecting Separation and Detection of Explosives by High-Field Asymmetric Waveform Ion Mobility Spectrometry (FAIMS) / Mass Spectrometry;** Alex C. Wu; Richard A. Yost; *University of Florida, Gainesville, FL*

TP 211 **A Software Tool for Processing Visualising, and Manipulating Multi Dimensional IMS-MS and LC-IMS-MS Data;** Martin Green; Kieran Neeson; Keith Richardson; Marc V. Gorenstein; Kevin Giles; *Waters Corporation, Manchester, UK*

TP 212 **Optimization of Ion Injection into a Planar FAIMS Cell;** Leonard Rorrer; Richard A. Yost; *University of Florida, Gainesville, FL*

TP 213 **Characterization of a Novel Ion Mobility-Tandem Mass Spectrometry Approach;** Yehia Ibrahim; Mikhail Belov; David Prior; William Danielson III; Richard D. Smith; *Pacific Northwest National Laboratory, Richland, WA*

TP 214 **A New Unified Data Format for Ion Mobility-Time-of-Flight Mass Spectrometry;** William F. Danielson; Yan Shi; Anoop M. Mayampurath; Brian H. Clowers; Nathaniel Beagley; Anuj R. Shah; Gordon A. Anderson; Richard D. Smith; *Pacific Northwest National Laboratory, Richland, WA*

TP 215 **Comparison of Square and Sinusoidal Waveforms on a Miniaturized FAIMS Planar Cell for Explosives**

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TP 215	Detection: <u>Chia-wei Tsai</u> ¹ ; Marilyn Prieto ¹ ; Ilya Kaminsky ² ; Robert Ferran ² ; Said Boumsellek ² ; Richard A. Yost ^{1,1} <i>University of Florida, Gainesville, FL;</i> ² <i>Implant Sciences Corporation, San Diego, CA</i>	TP 226	An Electrospray Ion Funnel Interface for Ion Mobility-Mass Spectrometry: <u>Junho Jeon</u> ; Jody May; Kent Gillig; David H. Russell; <i>Texas A&M University, College Station, TX</i>
TP 216	Evidence for Promotion of H/D Exchange During Transitions between Conformations of the [M+1H]¹¹⁴ State of Ubiquitin: <u>Brian C. Bohrer</u> ; Natalya Atlasevich; David E. Clemmer; <i>Indiana University, Bloomington, IN</i>	TP 227	Enhancements to the Ion Mobility Performance of a Travelling Wave Separation Device: <u>Kevin Giles</u> ; Tony Gilbert; Martin Green; Garry Scott; <i>Waters Corporation, Manchester, UK</i>
TP 217	The Interaction of Metal Counter Ions with Heparin Octasaccharides: An Ion Mobility / Mass Spectrometry Study: <u>You Jin Seo</u> ; Matthew R. Schenauer; Julie A. Leary; <i>UC Davis, Davis, CA</i>	TP 228	Gas Phase Stability of Protein-Ligand Complexes: Unfolding and Dissociation Pathways Studied by Electrospray Ionisation-Ion Mobility-Mass Spectrometry: Jonathan Hopper; <i>Univeristy of Nottingham, Nottingham, UK</i>
TP 218	Ion Mobility Spectrometry for determining binding, bridging and the formation of Non-Covalent Complexes: <u>Bruce Andrien</u> ; Rekha Patel; Christine Nowak; Adam W. Lucka; <i>Alexion Pharmaceuticals, Chesire, CT</i>	TP 229	Metals in Medicine: Ion Mobility Derived Gas Phase Atomic Radii: <u>Iain D G Campuzano</u> ¹ ; Keith Richardson ¹ ; Kevin Giles ¹ ; Jonathan P. Williams ³ ; Alison E. Ashcroft ² ; Tom Knapman ² ; Tijana Bugarcic ³ ; Abraha Habtemariam ³ ; Mark Rodger ³ ; Peter Sadler ³ ; ¹ <i>Waters Corporation, Manchester, UK;</i> ² <i>University of Leeds, Leeds, UK;</i> ³ <i>University of Warwick, Coventry, United Kingdom</i>
TP 219	Data Analysis Pipeline for LC-IMS-MS Based Proteomics: <u>Gordon Anderson</u> ; Anuj Shah; Erin Baker; Ashoka D. Polpitiya; Nikola Tolić; Anoop M. Mayampurath; Brian H. Clowers; Rui Zhao; Mikhail Belov; Richard D. Smith; <i>Pacific Northwest National Laboratory, West Richland, WA</i>	TP 230	Multiply Charged Ionic Liquid Nanodroplets as Mobility Standards for Tandem Ion Mobility – Mass Spectrometry: <u>Christopher J. Hogan</u> ; Juan Fernandez de la Mora; <i>Yale University - Mechanical Engineering, New Haven, CT</i>
TP 220	Conformation Analysis of Carbonic Anhydrase2 Using Ion Mobility and Collision-Induced Dissociation Combined with Electrospray Ionization: Yoshiaki Nabuchi ¹ ; <u>Kenji Hirose</u> ² ; Mitsuo Takayama ¹ ; ¹ <i>Yokohama City University, Yokohama, Kanagawa, Japan;</i> ² <i>Nihon Waters K.K., Osaka, Japan</i>	TP 231	Ion Mobility Spectrometry for Rapid Direct Analysis of Swabs for Pharmaceutical Manufacturing Equipment Cleaning Verification: Mark A. Strege; <i>Eli Lilly and Company, Indianapolis, IN</i>
TP 221	A Comparison of Travelling Wave and Drift Tube Ion Mobility Separations in a Novel rf Confined Helical Geometry Ion Guide: <u>Steven D Pringle</u> ; John B Hoyes; David Langridge; Tony Gilbert; <i>Waters Corporation, Manchester, UK</i>	TP 232	On-Line Chromatography/ Dynamically Multiplexed Ion Mobility/Time-of-Flight Mass Spectrometry for High Throughput Proteomics: <u>Mikhail Belov</u> ; Yehia Ibrahim; David Prior; William F. Danielson; Erin Baker; Rui Zhao; Daniel Lopez-Ferrer; Brianne O Petritis; Richard D. Smith; <i>Pacific Northwest National Laboratory, Richland, WA</i>
TP 222	Travelling Wave Ion Mobility Mass Spectrometry-based Conformational Studies of Prion Protein - Comparison of Recombinant Truncated Mouse and Syrian Hamster: <u>Gillian R. Hilton</u> ¹ ; Konstantinos Thalassinos ¹ ; Narinder Sanghera ¹ ; Susan E. Slade ¹ ; Teresa J. T. Pinheiro ¹ ; James Scrivens ² ; ¹ <i>University of Warwick, Coventry, UK;</i> ² <i>Univ of Warwick, Coventry, UK</i>	TP 233	Compensation Voltage and Experimental Conditions Standardization in FAIMS: <u>Alexander Aksenov</u> ; Alexander Aksenov; <i>LGC Limited, Teddington, UK</i>
TP 223	Coupling Direct Analysis in Real Time to Atmospheric Pressure Drift Tube Ion Mobility Spectrometry for Gaseous, Solid and Liquid Sample Analysis: <u>Glenn A Harris</u> ¹ ; Mark Kwasnik ² ; Facundo Fernandez ³ ; ¹ <i>Georgia Institute of Technol, Atlanta, GA;</i> ² <i>Georgia Tech, Atlanta, GA;</i> ³ <i>Georgia Institute of Technology, Atlanta, GA</i>	TP 234	Fundamentals of Ion/Ion Interactions in Ion Mobility Spectrometry: <u>Aleksey V. Tolmachev</u> ; Brian H. Clowers; Mikhail E. Belov; Richard D. Smith; <i>Pacific Northwest National Lab, Richland, WA</i>
TP 224	Evaluating Gas Phase Structure of Oligosaccharide by Positive/Negative MALDI-IM-TOFMS: <u>Pei-Jing Pai</u> ; Kent J. Gillig; Liuxi Chen; Lei Tao; David H. Russell; <i>Texas A&M University, College Station, TX</i>	TP 235	Characterisation of Oligomers during Amyloid Fibril Formation Using Electrospray Ionisation – Travelling Wave Ion Mobility Spectrometry – Mass Spectrometry (ESI-TWIMS-MS): <u>Alison E. Ashcroft</u> ; David Smith; Tom W. Knapman; Joshua T. Berryman; Sheena E. Radford; <i>Astbury Centre for Structural Molecular Biology, University of Leeds, Leeds, UK</i>
TP 225	Computational Methods for Analyzing Liquid Chromatography Ion Mobility Spectrometry Mass Spectrometry Data: <u>Anoop M. Mayampurath</u> ¹ ; Hyejin Yoon ¹ ; Stephen Valentine ² ; Ruwan Kurulugama ¹ ; Manolo D. Plasencia ¹ ; David E. Clemmer ¹ ; Haixu Tang ¹ ; ¹ <i>Indiana University, Bloomington, IN;</i> ² <i>Predictive Physiology and Medicine, Inc., Bloomington, IN</i>	TP 236	Separation and Characterization of Copolymers by Ion Mobility Mass Spectrometry: <u>Chrys Wesdemiotis</u> ¹ ; Nilufer Solak ¹ ; Andrew Baker ² ; ¹ <i>The University of Akron, Akron, OH;</i> ² <i>Waters, Inc., Pleasanton, CA</i>
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TP 237	In Vitro Stability of GLP-1 in Human Serum and Plasma: <u>Jizu Yi</u> ; Yan-Qiu Song; David Craft; <i>BD Diagnostics, Franklin Lakes, NJ</i>	TP 238	Neonatal Diagnosis of Mucopolysaccharidosis II (Hunter Syndrome) Using Dried Bloodspots for Enzymatic Assay by Tandem Mass Spectrometry: <u>Brian J. Wolfe</u> ; Sophie Blanchard; C. Ronald Scott; Michael Gelb; Frantisek Turecek; <i>University of Washington, Seattle, WA</i>
TP 239	Exploring Electrostatic Interactions in the Denatured States of Proteins by Positive/Negative MALDI-IM-TOF: <u>Liuxi Chen</u> ; Lei Tao; Kent Gillig; David H. Russell; <i>Texas A&M University, College Station, TX</i>		

TUESDAY POSTERS

TP 239 **A Cross-validated Quantitative MALDI-TOF Assay for the Rapid Analysis of Hepcidin in Biofluids;** Damon Anderson¹; Udo Roth²; Christoph Menzel²; Matthew Heeney¹; Mark Fleming¹; Hanno Steen¹; ¹*Harvard Medical School/Children's Hospital Boston, Boston, MA;* ²*qiagen GmbH, Hilden, Germany*

TP 240 **Simulation of the Oxidative Metabolism of Caspase Binding Radioligands (CBRs) by Online Electrochemistry-HPLC-MS;** Anne Baumann¹; Andreas Faust²; Klaus Kopka²; Uwe Karst¹; ¹*University Münster, Inst. of Inorg. & Anal. Chem., Münster, Germany;* ²*University Hospital Münster, Nuclear Medicine, Münster, Germany*

TP 241 **Speciesanalysis of Cisplatin Complexes in the Human Body;** Christine Brauckmann; Björn Meermann; Uwe Karst; *University of Muenster, Münster, Germany*

TP 242 **MALDI-TOF Mass Spectrometry Based Identification of Clinically Important Microorganisms;** Steven K. Drake; Lindsay G. Stevenson; Nayana Patel; Patrick R. Murray; *National Institute of Health, Bethesda, MD*

TP 243 **Application of Electrospray Ionisation for Analysis of Mice Liver – a Bioprospection Issue;** Maria Francesca Riccio Fonseca^{1,2}; Luciane Carla Alberici¹; Rosana Maria Alberici²; Helena C F de Oliveira³; Rodrigo Catharino¹; Aníbal Eugênio Vercesi¹; Marcos N Eberlin²; ¹*Departamento de Patología Clínica - UNICAMP, Campinas, Brazil;* ²*Thomson Lab UNICAMP, Campinas, Sp, Brazil;* ³*Dept. Fisiologia e Biofísica – IB – UNICAMP, Campinas, Brazil*

TP 244 **LC-MS Measurement of Alpha-Ketoglutarate Levels in Blood as an Indicator of Human Health;** William E. Holmes¹; Andrew S. McDaniel¹; Stefan Pierzynowski²; Randal K. Buddington³; ¹*Mississippi State University, Mississippi State, MS;* ²*Lunds Universitet, Lund, Sweden;* ³*University of Memphis, Memphis, TN*

TP 245 **Determination of the Enzyme Activity of 3-Methyl-Crotonyl CoA Carboxilase by Liquid Chromatography-Mass Spectrometry;** Eszter Javorzky; Laszlo Szonyi; Zoltan Takats; *Semmelweis University, Budapest, Hungary*

TP 246 **Novel ATP7B Peptide Quantitation in Dried Blood Spots by LC-MS/MS for Newborn Screening of Wilson Disease;** Sandra Kerfoot¹; Sihoun Hahn^{1,2}; ¹*Seattle Childrens Research Institute, Seattle, WA;* ²*University of Washington School of Medicine, Seattle, WA*

TP 247 **Analysis of Urinary Nucleosides as Potential Tumor Markers in Human Colorectal Cancer by LC/MS/MS;** Chien-chen Lai¹; Wei-Yi Hsu²; Fuu-Jen Tsai²; ¹*National Chung Hsing University, Taichung, Taiwan;* ²*China Medical University Hospital, Taichung, Taiwan*

TP 248 **Characterization of Pathogenic Bacteria from Clinical Samples by Combining Functional Nanoparticle-Based Capture with MALDI MS Analysis;** Ya-Shiuan Lin¹; Wei-Jen Chen¹; Te-Lung Tsai²; Yu-Chie Chen¹; ¹*National Chiao Tung University, Hsinchu, Taiwan;* ²*Hsinchu Mackay Memorial Hospital, Hsinchu, Taiwan*

TP 249 **A System Biology Approach for Identification of Biomarker Candidates for IgAN and TBMN via Proteomic Profiling of Human Urinary Exosomes;** Pyong-gon Moon¹; Jeong-Eun Lee¹; Sungyong You²; In-San Kim¹; Tae-Hwan Kwon¹; Chan-Duck Kim¹; Sun-Hee Park¹; Daehee Daehee²; Yong-Lim Kim¹; Moon- chang Baek¹; ¹*Kyungpook Nat'l Univ., Daegu, South Korea;* ²*POSTECH, Pohang, South Korea*

TP 250 **Cholesterol and Dehydrocholesterols Analysis from Patients with the Smith-Lemli-Opitz Syndrome by Atmospheric Pressure Thermal Desorption Chemical Ionization Mass Spectrometry (APTDCl-MS);** Giuseppe Paglia¹; Oceania D'Apolito¹; Antonio Dello Russo²; Gaetano Corso¹; ¹*Dept. Biomedical Sciences, Foggia, Italy;* ²*Dept of Biochemistry & Medical Biohecnology, Napoli, Italy*

TP 251 **A New Approach for Acute Clinical Toxicology Based on Ion Trap MSMS Library Search;** Roman Mylonas¹; Yann Mauron¹; Alexandre Masselot²; Oliver Philippe²; Pierre-Alain Binz^{1,2}; Veronique Viette^{3,4}; Marc Fathi³; Denis F Hochstrasser^{3,5}; Frederique Lisacek¹; Sebastian Goetz⁶; Birgit Schneider⁶; Jens Vagts⁶; Carsten Baessmann⁶; ¹*Swiss Institute of Bioinformatics, Geneva, Switzerland;* ²*Geneva Bioinformatics (GeneBio), Geneva, Switzerland;* ³*Geneva University Hospital, Geneva, Switzerland;* ⁴*ADMed Fundation, La Chaux-de-Fonds, Switzerland;* ⁵*Swiss Center for Applied Human Toxicology, Geneva, Switzerland;* ⁶*Bruker Daltonik GmbH, Bremen, Germany*

TP 252 **Selective Detection of Polyethylene Glycol Based Laxatives in Children Stool;** Martin Sadilek¹; Kenneth Feldman^{2,3}; Karen F. Murray^{2,3}; Melissa Young³; Suzan Mazor^{2,3}; ¹*University of Washington, Department of Chemistry, Seattle, WA;* ²*University of Washington, School of Medicine, Seattle, WA;* ³*Seattle Children's, Seattle, WA*

TP 253 **Precise Determination of Glomerular Filtration Rate by Iothalamate Clearance Using LC-MS/MS;** Jesse C. Seegmiller; Bradley E. Burns; John C. Lieske; Timothy S. Larson; *Mayo Clinic, Rochester, MN*

TP 254 **Speciation Analysis of Gd-Based MRI Contrast Agents in Human Body Fluids;** Lena Telgmann¹; Jens Kuennemeyer¹; Faruk Tokmak²; Uwe Karst¹; ¹*University of Münster, Muenster, Germany;* ²*University of Bochum, Bochum, Germany*

TP 255 **Mass Spectrometry in Sports Drug Testing: Characterization and Detection of RYCALs – Endurance-Enhancing Ryanodine-Calstabin-Complex Stabilizers;** Mario Thevis¹; Simon Beuck¹; Andreas Thomas¹; Maxie Kohler¹; Mathias Schäfer²; Wilhelm Schänzer¹; ¹*German Sport University, Cologne, Germany;* ²*University of Cologne, Cologne, Germany*

TP 256 **Quantitation of Hepcidin in Body Fluids for Diagnosis and Monitoring of Iron Disorders;** Melvin CL Gay¹; Debbie Trinder^{2,3}; John K Olynyk^{2,3}; Ian Mullaney¹; Robert Trengove¹; ¹*Murdoch University, Murdoch, Australia;* ²*Western Australain Institue for Medical Research, Perth, Australia;* ³*University of Western Australia, Perth, Australia*

TP 257 **A Sensitive Proteomics Approach for the Determination of Carbohydrate Deficient Transferrin in Serum by Isotope Dilution Tandem Mass Spectrometry;** Coleman T Turgeon; H. Robert Bergen, III; Linda M Benson; Mark J Magera; John F O'Brien; Devin D Oglesbee; *Mayo Clinic College of Medicine, Rochester, MN*

TP 258 **Urinary Biomarker Discovery for Early Diagnostics of Human Contrast Induced Kidney Injury Using 2-D DIGE Followed by MS Analyses;** Ling Wang³; Zhaohui Ni³; Jim M. Jia¹; Fuquan Yang²; Ran Zheng⁴; ¹*KBI, Kunming, China;* ²*Institute of Biophysics, China Academy of Science, Beijing, China;* ³*Renji Hospital,*

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<i>Jiao Tong Univ. School of Medicine, Shanghai, China; ⁴ICBR/UF, Gainesville, FL</i>	Shenheng Guan; Feixia Chu; Raisa Talroze; Al Burlingame; <i>University of California San Francisco, San Francisco, CA</i>
TP 259 Automated SPE-LC/MS/MS Assay for Immunosuppressant Drugs from Whole Blood; <u>Kimberly Eaton</u> ¹ ; Kimberly Gamble ² ; Tony Brand ³ ; M.p. George ³ ; Ken Lewis ¹ ; ¹ <i>OpAns, LLC, Durham, NC</i> ; ² <i>MicroLiter Analytical Supplies, Inc., Suwanee, GA</i> ; ³ <i>Agilent Technologies, Raleigh, NC</i>	TP 270 Improved Analysis of Histones Using a LTQ-Orbitrap with ETD and a Nanoacuity Chromatography System; <u>David A. Maltby</u> ; Shannon M Eliuk; A.I. Burlingame; <i>University of California, San Francisco, CA</i>
PROTEOMICS: PTM DETERMINATION (HISTONES), 260 - 273	
TP 260 Determination of Sirtuin Deacetylation Sites Using Biotinylation Combined with Mass Spectrometry; <u>Stephen Swatkoski</u> ; Poonam Bheda; Cynthia Wolberger; Robert J. Cotter; <i>Johns Hopkins University School of Medicine, Baltimore, Maryland</i>	TP 271 Identification of Post-Translational Modifications on Nucleoplasmin from Xenopus laevis Oocytes Using High Resolution Front-End Electron Transfer Dissociation Mass Spectrometry; <u>Josh Nicklay</u> ¹ ; David Shechter ² ; Philip Compton ¹ ; C. David Allis ² ; Donald F. Hunt ¹ ; ¹ <i>University of Virginia, Charlottesville, VA</i> ; ² <i>Rockefeller University, New York, NY</i>
TP 261 Mass Spectrometric Screening of Histone Modifications Uncovers Global Resistance Mechanism to Apoptosis in Yeast; Neil L. Kelleher; <u>Cong Wu</u> ; Lihua Jiang; Mingxi Li; Manjui V. Lee; <i>University of Illinois at Urbana-Champaign, Urbana, IL</i>	TP 272 Progress Towards the Human Chromatome; <u>Mariana D. Plazas-Mayorca</u> ; Nicolas L. Young; Benjamin A. Garcia; <i>Princeton University, Princeton, NJ</i>
TP 262 Automated On-Line Sample Preparation for Profiling Changes in Histone Modifications Using a QTOF Mass Spectrometer; <u>Paul Drogaris</u> ¹ ; Eric Bonneil ² ; Christelle Pomies ³ ; Kevin Killeen ⁴ ; Pierre Thibault ⁵ ; ¹ <i>Université de Montréal, Montréal, Canada</i> ; ² <i>Université de montréal, Montreal, QC</i> ; ³ <i>IRIC/University of Montreal, Montreal, QC</i> ; ⁴ <i>Agilent Laboratories, Santa Clara, CA</i> ; ⁵ <i>Univ.of Montreal, Montreal, QC</i>	TP 273 Combining ChIP Antibodies and Mass Spectrometry to Study Post-Translational Modifications on Histones; <u>Katherine Stamper</u> ¹ ; Robert J. Cotter ² ; ¹ <i>Johns Hopkins University, Baltimore, MD</i> ; ² <i>Middle Atlantic MS Laboratory, Baltimore, MD</i>
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TP 263 Mapping the Post-Translational Modifications of Human RNA Pol II C-Terminal Domain; <u>William Drury</u> ¹ ; Christine Jelinek ² ; Luis A. Rojas ¹ ; Robert J. Cotter ³ ; Danny Reinberg ^{1,1} ; ¹ <i>NYU-SOM/HHMI, New York, NY</i> ; ² <i>Johns Hopkins School of Medicine, Baltimore, MD</i> ; ³ <i>Middle Atlantic MS Laboratory, Baltimore, MD</i>	TP 274 The Analytical Method to Find the Conditions of Coalescence Onset in FT-ICR; <u>Ivan Boldin</u> ; Eugene Nikolaev; <i>Institute for Energy Problems of Chemical Physics, Moscow, Russian Federation</i>
TP 264 Identification and Quantitation of Messenger Ribonucleoprotein Complexes (mRNPs) in the Presence and Absence of Arginine Methylation; <u>Ambrosius Snijders</u> ; Guillaume Hautbergue; Stuart Wilson; Mark Dickman; <i>University of Sheffield, Sheffield, UK</i>	TP 275 Study on the Space-Charge Mediated Shift in Magnetron Frequency and its Utility for Quantitative Measurements in FT-ICR Mass Spectrometry; Pavel N. Sagulenko ^{1,2} ; Alexander Yu. Agapov ^{1,2} ; Dmitry A. Tolmachev ¹ ; <u>Mikhail V. Gorshkov</u> ¹ ; <i>Institute for Energy Problems of Chemical Physics, Moscow, Russia</i> ; ² <i>Moscow Institute of Physics and Technology, Dolgoprudny, Russia</i>
TP 265 Initial Characterization of Lysine Propionylation Pathway; <u>Yue Chen</u> ¹ ; Zhongyi Cheng ¹ ; Yi Tang ² ; Sung Chan Kim ¹ ; Wei Gu ² ; Yingming Zhao ¹ ; ¹ <i>The University of Chicago, Chicago, IL</i> ; ² <i>Columbia University, New York, NY</i>	TP 276 Particle-in-Cell Algorithm Implemented on MIMD-Class Supercomputers for Simulating Ion Cloud Dynamics with Injection in the FT-ICR Cell and Sidekick; <u>Andriy Kharchenko</u> ¹ ; <u>Gleb Vladimirov</u> ² ; Eugene Nikolaev ² ; Ron Heeren ¹ ; ¹ <i>FOM Institute for Atomic and Molecular Physics, Amsterdam, Netherlands</i> ; ² <i>Institute for Energy Problems of Chem.Physics, Moscow, Russia</i>
TP 266 Histone Post Translational Modifications Associated with Transcription; <u>Jessica R. Chapman</u> ¹ ; Kristie L. Rose ¹ ; Klaas W. Mulder ² ; F.M.A. Richard van Schaik ² ; Jeffrey Shabanowitz ¹ ; H.Th. Marc Timmers ² ; Donald F. Hunt ¹ ; ¹ <i>University of Virginia, Charlottesville, VA</i> ; ² <i>University Medical Centre-Utrecht, Utrecht, The Netherlands</i>	TP 277 Particle-In-Cell Ion Trajectory Simulations To Model Observed FTICR-MS Space Charge Frequency Shifts; <u>Franklin E. Leach III</u> ¹ ; Jon Amster ¹ ; Andriy Kharchenko ² ; Eugene Nikolaev ³ ; Ron M.a. Heeren ⁴ ; ¹ <i>University of Georgia, Athens, GA</i> ; ² <i>FOM Institute for Atomic and Molecular Physics, Amsterdam, Netherlands</i> ; ³ <i>The Institute for Energy Problems of Chemical Phys, Moscow, Russian Federation</i> ; ⁴ <i>FOM Inst. Atomic/Molecular Phy, Amsterdam, Netherlands</i>
TP 267 Hyperpropionylation of Histone H3 lysine 23 is Specific in U937 Cell Line; <u>Kangling Zhang</u> ¹ ; Yihui Lin ² ; Xuehui Song ² ; Agus Darmanto ¹ ; Quoling Xu ² ; ¹ <i>Loma Linda University, Loma Linda, CA</i> ; ² <i>Institute of biochem. & cell biol., Shanghai, China</i>	TP 278 Limits of FT-ICR MS Resolution and Dynamic Range from Supercomputer Modeling of Ion Cloud Motion in an ICR cell; <u>Eugene Nikolaev</u> ¹ ; Gleb Vladimirov ¹ ; Ivan Boldin ¹ ; Ron M.a. Heeren ² ; Chris Hendrickson ³ ; Greg Blakney ³ ; Alan G. Marshall ⁴ ; ¹ <i>The Institute for Energy Problems of Chemical Phys, Moscow, Russian Federation</i> ; ² <i>FOM Inst. Atomic/Molecular Phy, Amsterdam, Netherlands</i>
TP 268 MS Identification of A Redox-dependent Pathway for Regulating Histone Deacetylase in Cardiac Myocytes; <u>Hong Li</u> ; Tong Liu; Tetsuro Ago; Wei Chen; Junichi Sadoshima; <i>UMDNJ, Newark, NJ</i>	TP 279 Exchange of Axial and Radial Kinetic Energy During Ion Transfer Through Multipole Ion Guides in a Strong Magnetic Field Gradient; <u>Steve Beu</u> ¹ ; Chris
TP 269 A Fast Screening Method for Detecting Difference in Post-Translational Modifications of Proteins by Bioinformatics and FTICR/ECD/MS/MS; <u>Frank Li</u>	

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Hendrickson ² ; Alan G. Marshall ³ ; ¹ S C Beu Consulting, Austin, TX; ² National High Magnetic Field Laboratory, Tallahassee, FL; ³ Ion Cyclotron Resonance Prog, Tallahassee, FL	Biosciences, University of Birmingham, Birmingham, UK; ³ ThermoFisher Scientific, San Jose, CA Simplified DREAMS Device Implemented on Bruker 7T Apex-Qe FTICR; Dale Whittington ¹ ; Ryan M. Danell ² ; Gary Kruppa ³ ; Ross F. Lawrence ¹ ; William N. Howald ¹ ; David R. Goodlett ¹ ; ¹ University of Washington, Seattle, WA; ² Danell Consulting, Greenville, NC; ³ Bruker Daltonics Inc., New York, NY
TP 280 Low Cost Higher Frequency RF Power Supplies for Quadrupole Ion Guides in FT-ICR Instruments with External Ion Sources; Jan E. Szulejko; Behrooz Zekavat; David LaBrecque; Touradj Solouki; University of Maine, Orono, ME	TP 291
TP 281 Improved Broadband Phase Correction of Complex FT-ICR Mass Spectra: Baseline Roll and Apodization; Feng Xian ¹ ; Chris Hendrickson ² ; Greg T. Blakney ³ ; Steve Beu ⁴ ; Alan G. Marshall ⁵ ; ¹ Department of Chemistry and Biochemistry, FSU, Tallahassee, FL; ² National High Magnetic Field Laboratory, Tallahassee, FL; ³ National ICR Program at NHMFL, Tallahassee, FL; ⁴ S C Beu Consulting, Austin, TX; ⁵ Ion Cyclotron Resonance Prog, Tallahassee, FL	DIRECT IONIZATION (DESI, DART AND ASAP), 292 - 310
TP 282 Applications of a Compensated Trap to Top-Down Proteomics in FTMS; Don L. Rempel; Adam Brustkern; Michael L. Gross; Washington University, St Louis, MO	TP 292 Analysis of Post-Blast Pipe Bomb Fragments Using DESI-Mass Spectrometry; Joseph H Kennedy ¹ ; John V Goodpaster ² ; Erica Lotspeich ² ; Justin Wiseman ¹ ; ¹ Prosolia Inc, Indianapolis, IN; ² IUPUI, Indianapolis, IN
TP 283 Cluster Ion Source Designed for 9.4 T FT-ICR Identification of Products of Mass-Selected Ion-Molecule Reactions; Alan G. Marshall ^{1,2} ; Nathan K. Kaiser ¹ ; Christopher L. Hendrickson ^{1,2} ; Paul W. Dunk ² ; Harold W. Kroto ² ; ¹ National High Magnetic Field Laboratory, Tallahassee, FL; ² Florida State University, Tallahassee, FL	TP 293 Direct Characterization of Complex Viscous Mixtures by Extractive Electrospray Ionization Mass Spectrometry; Wai Siang Law ¹ ; Huanwen Chen ^{2,3} ; JianHua Ding ^{2,3} ; Liang Zhu ¹ ; Gerardo Gamez ¹ ; Konstantin Chingin ¹ ; Shuiping Yang ³ ; Yulin Ren Ren ³ ; Renato Zenobi ¹ ; ¹ ETH Zurich, Zurich, Switzerland; ² East China Institute of Technology, Fuzhou, China; ³ Jilin University, Changchun, China
TP 284 Design and Performance of a Novel 9.4 Tesla FT-ICR Mass Spectrometer for Proteome and Petroleum Analysis; Nathan K. Kaiser ¹ ; John Paul Quinn ¹ ; Gregory T. Blakney ¹ ; Daniel G. McIntosh ¹ ; Christopher L. Hendrickson ^{1,2} ; Alan G. Marshall ^{1,2} ; ¹ National High Magnetic Field Laboratory, Tallahassee, FL; ² Florida State University, Tallahassee, FL	TP 294 In vivo Detection of intramuscular Injected Ephedrine in Breath by EESI-MS; Jianhua Ding ^{1,2} ; Haiwei Gu ^{1,3} ; Bin Hu ¹ ; Zhuanzhang Wu ¹ ; Yulin Ren ² ; Huanwen Chen ^{1,2} ; ¹ East China Institute of Technology, Fuzhou, P.R.China; ² Jilin University, Changchun, P.R.China; ³ Validation Resources, LLC, Bend, OR
TP 285 A 5T Bench Top FT-ICR Instrument with Compact Cryogen-Free Superconducting Magnet System; Alexander S. Misharin; Andrey N. Vilkov; Vladimir M. Doroshenko; MassTech Inc., Columbia, MD	TP 295 DESI-MS as a Tool for Obtaining Quick Answers to Practical Pharmaceutical Questions; Laura Sharon ¹ ; Peter M. Yehl ¹ ; Peng Wang ² ; Hong Gao ² ; Margaret Figus ² ; Fanyu Meng ² ; Xiaoyi Gong ² ; ¹ Merck & Co., Inc., West Point, PA; ² Merck & Co., Inc, Rahway, NJ
TP 286 Advanced Data Acquisition Strategy for a 14.5 T Hybrid Linear Ion Trap Fourier Transform Ion Cyclotron Resonance Mass Spectrometer; Greg T. Blakney ¹ ; Chris Hendrickson ^{1,2} ; Alan G. Marshall ^{1,2} ; ¹ National ICR Program at NHMFL, Tallahassee, FL; ² Florida State University, Tallahassee, FL	TP 296 Direct Analysis of Reversed-Phase HPTLC Separated Peptides from Protein Tryptic Digests Using a Surface Sampling Probe/ESI-MS System; Joshua F. Emory ¹ ; Matthew J. Walworth ¹ ; Vilmos Kertesz ¹ ; Gary J. Van Berkel ¹ ; Michael Schulz ² ; Susanne Minarik ² ; ¹ Oak Ridge National Laboratory, Oak Ridge, TN; ² Merck, Darmstadt, Germany
TP 287 High Resolution Broadband FTMS Data via Data Streaming for Complex Mixture Analysis; Christopher Thompson ¹ ; Steve Van Orden ¹ ; Joe Meier ¹ ; Christoph Gosteli ² ; Michael Schenkel ² ; ¹ Bruker Daltonics Inc., Billerica, MA; ² Bruker BioSpin, Fallanden, Switzerland	TP 297 Extractive Electrospray Ionization Ion Cyclotron Resonance Mass Spectrometry for Rapid Unambiguous Detection of Phthalates in Complex Matrices; Huanwen Chen ^{1,2} ; Konstantin Chingin ¹ ; Liang Zhu ¹ ; Gerardo Gamez ¹ ; Renato Zenobi ¹ ; ¹ ETH Zürich, Zürich, Switzerland; ² East China Institute of Technology, FuZhou, China
TP 288 Precision Proteomics on Ultrahigh Resolving Power 12 and 15 Tesla FTICR Mass Spectrometers; Yuri E.M. Van Der Burgt; Magnus Palmblad; André M. Deelder; Leiden University Medical Ce, Leiden, Netherlands	TP 298 Rapid Desorption Electrospray Ionization Using Hadamard Transform Time-of-Flight Mass Spectrometry; Griffin K. Barbula; Matthew D. Robbins; Richard N. Zare; Stanford University, Stanford, CA
TP 289 Front-End Electron Transfer Dissociation: A Novel, Sub-Atmospheric, Electrical Discharge Ion Source; Philip Compton; Jeffrey Shabanowitz; Donald F. Hunt; University of Virginia, Charlottesville, VA	TP 299 DESI-MS of <i>Francisella tularensis</i> Inoculation Pathways; Tamara Sibray ¹ ; Richard Bowen ² ; John T. Belisle ² ; Franco Basile ^{1,7} ⁷ University of Wyoming, Laramie, WY; ² Colorado State University, Fort Collins, CO
TP 290 Separation of Isobaric Phosphopeptides by High Field Asymmetric Waveform Ion Mobility Spectrometry Confirmed by LTQ Orbitrap XL ETD Mass Spectrometry; Yue Xuan ¹ ; Andrew Creese ² ; Julie Horner ³ ; Helen J. Cooper ² ; Thomas Moehring ¹ ; ¹ ThermoFisherScientific, Bremen, Germany; ² School of	TP 300 Novel Chromatographic Separations Using an Atmospheric Solids Analysis Probe (ASAP) Mass Spectrometry; Richard G. McKay ¹ ; Barbara S. Larsen ² ; Charles N. McEwen ³ ; ¹ M&M Mass Spec Consulting LLC, Hockessin, DE; ² The DuPont Company, Wilmington, DE; ³ Univ. of the Sciences in PA, Philadelphia, PA

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TP 301 **A Desorption Corona Beam Ionization Source for Direct Analysis of Samples from Surface;** Wenjian Sun; Xiaohui Yang; Junsheng Zhang; Tao Lin; Li Ding; *Shimadzu Research Laboratory (Shanghai), Shanghai, China*

TP 302 **Open Probe – A Novel Method and Device for Ultra Fast Electron Ionization Mass Spectrometry Analysis;** Aviv Amirav; Marina Poliak; Alexander Gordin; *Tel-Aviv University, Tel-aviv, Israel*

TP 303 **Characterization of Weathering-Induced Structural Changes in Anti-Oxidant Additives within Polymer-Based Surface Coatings by Mass Spectrometry;** Martin R L Paine¹; Philip Barker²; Stephen J Blanksby¹; ¹*University of Wollongong, Wollongong, Australia*; ²*BlueScope Steel Research, Wollongong, Australia*

TP 304 **The Application of Low Temperature Plasma (LTP) Ambient Mass Spectrometry Ionization to Drugs of Abuse in Biological Matrices;** Ayanna Jackson¹; Juan F Garcia-reyes²; Jason D. Harper¹; Nicholas Charipar¹; R. Graham Cooks¹; ¹*Purdue University, West Lafayette, IN*; ²*University of Jaen, Jaen, Spain*

TP 305 **Ionization Mechanism of Positive Ion-DART: A Transient Microenvironment Theory;** Ligu Song; Stephen C. Gibson; Deepak Bhandari; Kelsey D. Cook; John E. Bartmess; *University of Tennessee, Knoxville, TN*

TP 306 **The Utilization of the Direct Analysis In Real Time Experiment Table (DART-ET) in a Pharmaceutical Development Environment;** Leah Buhler¹; Larry M. Mallis¹; Roy Helmy²; Peter Yehl¹; Xiaoyi Gong²; Timothy Rhodes²; ¹*Merck & Co., Inc, West Point, PA*; ²*Merck & Co., Inc., Rahway, NJ*

TP 307 **Rapid Semi-Quantitative Mapping of Dispersed Caffeine Using an Autosampler/DART/TOFMS;** Andrew H. Grange; *U.S. EPA, Henderson, NV*

TP 308 **Investigation of the Internal Energy Deposited During Direct Analysis in Real Time (DART) Mass Spectrometry;** Dana Hostetler¹; Glenn A Harris²; Facundo Fernandez³; ¹*Georgia Tech, Atlanta, GA*; ²*Georgia Institute of Technol, Atlanta, GA*; ³*Georgia Institute of Technology, Atlanta, GA*

TP 309 **Studies of the Mechanism and Limitations of DART Ionization;** Julia Rummel; John R. Eyler; David H. Powell; *University of Florida, Gainesville, FL*

TP 310 **Determination of Melamine and Cyanuric Acid in Dried Milk Using Direct Analysis in Real Time-Time-of-Flight Mass Spectrometry;** Lukas Vaclavik¹; Jana Hajslava¹; Bert Popping²; ¹*ICT Prague, Prague, Czech Republic*; ²*Eurofins Scientific Group, Yorkshire, UK*

LC/MS, 311 - 325

TP 311 **Development of High Performance TFA-Free Capillary and Nanoscale Protein Separations for LC-MS Protein Profiling;** Jia You; Christopher R. Gessner; Michael A. Freitas; *Ohio State University, Columbus, OH*

TP 312 **Cross Platform Evaluation of a Static and Dynamic Range Proteomic Mixture Comparing Search Engines and Parameters;** Archer Smith Iv¹; Gregory J. Bowersock¹; Landon Wilson¹; Ray Moore II¹; Jennifer Busby²; Stephen Barnes¹; James Mobley¹; Matthew B. Renfrow¹; ¹*University of Alabama at Birmingham, Birmingham, AL*; ²*TSRI-Scripps Florida, Jupiter, FL*

TP 313 **The Hunt for Human Plasma Biomarkers Using 55 cm LC Nano-Columns in Shotgun Proteomics;** Vilem Guryca; Sabine Kux van Geijtenbeek; Daniel Roeder; Maria Esther Ricci da Silva; Nikolaos Berntenis; Hans Werner Lahm; Hanno Langen; Axel Ducret; *F.Hoffmann-La Roche (MML), Basel, Switzerland*

TP 314 **A Comparative Analysis of Ubiquitinated Substrates by SCX and ZIC-HILIC Followed by RP-UPLC-MS/MS;** Geoffrey Smith; Sonja Hess; Raymond J. Deshaies; *Caltech, Pasadena, CA*

TP 315 **Universal Hydrophobicity Scales and Peptide Retention Standards for Reversed-Phase HPLC in Proteomics Applications;** Oleg V. Krokkin; Michael Harder; Vic Spicer; *University of Manitoba, Winnipeg, Canada*

TP 316 **Development of an On-Line Two-Dimensional LC-MS Method with Multiple Peak Trapping Capabilities for the Characterization of MAbs;** Melissa Alvarez¹; Oleg Borisov²; Victor Ling¹; Guillaume Tremintin³; ¹*Genentech, Inc., So San Francisco, CA*; ²*Genentech, South San Francisco, CA*; ³*Dionex Corporation, Sunnyvale, CA*

TP 317 **Determination of 12 Aminoglycosides in Swine Muscle by Liquid Chromatography with Tandem Mass Spectrometry;** Chae-mi Lim; Byung-hoon Cho; Hyun-Jeong Kwon; Su-Jeong Park; Gap-Su Jeong; *National Veterinary Research & Quarantine Service, Anyang, South Korea*

TP 318 **A Simple and Rapid Analysis of Speciation of Selenium in Se-Enriched Rice and Green Tea by Foliar Enrichment Using HPLC-ICPMS;** Yong Fang^{1,2}; Yaofang Zhang¹; Qilin Chan¹; Qiuuhui Hu²; Joseph A. Caruso¹; ¹*University of Cincinnati, Cincinnati, OH*; ²*Nanjing Agricultural University, Nanjing, Jiangsu, China*

TP 319 **LC-MS/MS Identification of b-N-Methylamino-LAlanine in Cyanobacteria;** Zdenek Spacil^{1,2}; Johan Eriksson¹; Leopold L. Ilag¹; ¹*Stockholm University, Stockholm, Sweden*; ²*Faculty of Pharmacy, Charles University in Prague, Hradec Kralove, Czech Republic*

TP 320 **Screening of Botanical Extracts for Ligands to Quinone Reductase-2 Using Ultrafiltration LC-MS;** Xi Qiu¹; Yongsoo Choi¹; Hongjie Zhang¹; Yegao Chen²; Minghua Qiu³; Harry H.S. Fong¹; Richard B. Van Breemen¹; ¹*University of Illinois at Chicago, Chicago, IL*; ²*Yunnan Normal University, Yunnan, China P. R.*; ³*Chinese Academy of Sciences, Kunmin, China P. R.*

TP 321 **Fine Analysis of Asian Lacquer tree Extracts (Urushiol) by High Performance Liquid Chromatography/Tandem Mass Spectrometry;** Su-Min Park; Yu-Kyung Jung; Jin San Kim; Ki-Jung Paeng; *Yonsei university, Wonju, South Korea*

TP 322 **LC-APCI-MS/MS Analysis of Redox Status of Coenzymes CoQ9 and CoQ10 in Biological Samples as a Biomarker for Oxidative Stress;** Sergiu P. Palii¹; Timothy J. Garrett¹; Christiaan Leeuwenburgh¹; Nigel A. Calcutt²; Peter W. Stacpoole¹; ¹*University of Florida, Gainesville, FL*; ²*University of California, San Diego, CA*

TP 323 **Multipesticides Analysis of Water Samples by Direct Injection Using Ultra-Fast LC/MS/MS and Continuous Polarity Switching;** Detlev Schleuder¹; Jianru Stahl-Zeng¹; Jan Lembcke¹; Wolfram seitz²; Schulz Wolfgang²; Walter Weber²; ¹*Applied Biosystems, Germany, Darmstadt, Germany*; ²*Landeswasserversorgung Langenau, Langenau, Germany*

TP 324 **Analysis of Ketamine and its Metabolites in Urine by LC-FAIMS-MS;** Chung-Yu Chen; Maw-rong Lee; *National Chung-Hsing University, Taichung, Taiwan*

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TP 325	Determination of Red Dye #7 in Imported Candy by HPLC/MS/MS, a Food Safety Issue for the Modern Spectrometry Laboratory; Patrick Sasso; Scientist, Hainesport, NJ	¹ Department of Biochemistry, University of Melbourne, Parkville, Australia; ² Department of Chemistry, Monash University, Clayton, Australia; ³ Dept. of Mechanical Engineering, Monash University, Clayton, Australia
	LC/MS SAMPLE PREPARATION, 326 - 343	Systematical Optimization of LTQ-Orbitrap Platform for Protein Identification and Peptide Quantitation; Ping Xu; <u>Duc Duong</u> ; Junmin Peng; Emory University, Atlanta, GA
TP 326	A Rapid Visualized Indicator of Surfactant Residual (VISR) for the Generic and Membrane Proteomics Application; Chao-Jung Chen; Mei-Chun Tseng; Yet-Ran Chen; Academia Sinica, Taipei, Taiwan	Evaluating Peptide Adsorptive Loss to HPLC Autosampler Vials; Lynn Spruce ¹ ; Jessica Y. Lee ¹ ; Todd M Greco ^{1,2} ; Steven L. Cohen ¹ ; Steven H. Seeholzer ¹ ; ¹ Children's Hospital of Philadelphia, Philadelphia, PA; ² University of Pennsylvania, Philadelphia, PA
TP 327	An Improved Tryptic Peptide Mapping LC/MS Method Minimizes Digestion Induced Modifications in Proteins; Da Ren; Gary Pipes; Dingjiang Liu; Liang-Yu Shih; Drew Nichols; Michael Treuheit; David Brems; Pavel Bondarenko; AMGEN INC, Thousand Oaks, CA	Reproducing Peptide nano-LC/MS Data: Looking beyond the Sample; Jason S Harrington ¹ ; Anthony J. Makusky ¹ ; Jeffrey A. Kowalak ¹ ; Sanford P. Markey ² ; ¹ NIH, Bethesda, MD; ² NIMH, NIH, Bethesda, MD
TP 328	Label free Comparative Analysis of FFPE Specimen for Biomarker Discovery; Javad Nazarian; Yetrib Hathout; Tobey MacDonald; Children's Natl. Medical Center, Washington, DC	Novel Strategy to Screen Various Chemical Modifications on a Target Peptide: Combination of Group-Specific Immunoaffinity Extraction and Mass Spectrometry; Takaaki Goto; Shota Kojima; Seon Hwa Lee; Tomoyuki Oe; Tohoku University, Sendai, Japan
TP 329	Affinity-Enrichment Does, but Affinity-Depletion Does Not, Improve the Identification of Serum Proteins by 2D LC-MS/MS; Wenbo Zhi; Meiyao Wang; Sharad Purohit; Jin-Xiong She; Medical College of Ga, Augusta, GA	Development of an On-Bead Digestion Procedure for Immunoprecipitated Proteins; Matthew J Berberich ¹ ; Dhaval Nanavati ² ; Anthony J. Makusky ² ; Brian Martin ² ; Detlef Vullhorst ¹ ; Andres Buonanno ¹ ; Sanford P. Markey ² ; ¹ NICHD, NIH, Bethesda, MD; ² NIMH, NIH, Bethesda, MD
TP 330	Electrophoretic Enrichment and Fractionation of Low Molecular Weight Proteins for Bottom-Up Proteomic Analysis; Wes E Steiner; Benjamin Katz; Chuck Witkowski; Jeremy L. Norris; Protein Discovery, Inc., Knoxville, TN	Extraction of Activatable Cell Penetrating Peptides from Mouse Organs and Analysis with Orbitrap Mass Spectrometer; Larry Gross ^{1,2} ; Tao Jiang ^{1,2} ; Emilia S. Olson ³ ; Todd A. Aguilera ¹ ; Mike Whitney ¹ ; Jessica L. Crisp ¹ ; Roger Y. Tsien ^{1,2} ; ¹ UCSD, La Jolla, CA; ² Howard Hughes Medical Institute, La Jolla, CA; ³ UCSD School of Medicine, La Jolla, CA
TP 331	An SDS-PAGE-Based Sample Clean-up Method for LC-MS/MS Detection of Low Amounts of Protein in Complex Protein Mixtures Containing Contaminants; Wenzhu Zhang; Elizabeth Heller; Nathaniel Heintz; Brian Chait; The Rockefeller University, New York, NY	PEPTIDES FRAGMENTATION AND SEQUENCING, 344 - 371
TP 332	Assessing the Variability of Peptide Peak Areas in Online Pepsin Digestion; Joomi Ahn ¹ ; Martha Staples ¹ ; Keith Fadgen ¹ ; John R. Engen ² ; ¹ Waters Corporation, Milford, MA; ² Northeastern University, Boston, MA	Effect of Ring Substituents on the Dissociation Behavior of Model, Benzoic Acid Terminated Peptides and Esters; Dale R Kerstetter ¹ ; Anthony Vu ¹ ; Adam M Graichen ² ; Idia Tokunboh, ¹ ; Richard Vachet ² ; Michael J. Van Stipdonk ¹ ; ¹ Wichita State University, Wichita, KS; ² University of Massachusetts, Amherst, MA
TP 333	Identification of Multiple Sources of Partial Tryptic Peptides in LC-MS/MS Experiments and The Importance of Using Partial Trypsin Search Parameters; Kaye D. Speicher; Peter Hembach; Thomas Beer; Hsin-yao Tang; David W. Speicher; The Wistar Institute, Philadelphia, PA	Comparison of Free Radical Initiated Peptide Sequencing (FRIPS) and Electron Capture Dissociation for Characterization of Modified Peptides; Ashley Brant ¹ ; Jason W Kieltyka ² ; Kristina Hakansson ¹ ; ¹ University of Michigan, Ann Arbor, MI; ² Abbott Laboratories, Abbott Park, IL
TP 334	Coomassie Stains: Choices and Concerns: An evaluation of ESI-MS Compatibility; David Sumpton; Willy Vincent Bienvenut; Beatson Inst. Cancer Res., Glasgow, UK	Application of a Novel Site Selective N-Terminal Labeling Method on Peptide Sequencing; Min Bian; Suping Zheng; Steve Becht; Xiaoya Ding; PPD, Inc., Middleton, WI
TP 335	Application and Optimization of Various Phosphopeptide Enrichment Strategies for Selective Isolation and Enrichment of Sphingoid Base 1-Phosphates; YouXun Jin ² ; YunHwa Shi ² ; Jun Young Kwak ² ; Hwan-Soo Yoo ² ; Yong-Moon Lee ² ; Hun-Young So ¹ ; ¹ Yong-Hyeon Yim ¹ ; ¹ KRISS, Daejeon, South Korea; ² Chungbuk National Univ., Chongju, South Korea	Identification of the [14C]HKI-272 Covalent Binding Site on Human Serum Albumin Using In-Gel Tryptic Digestion and LC/MS Analysis; Jianyao Wang ¹ ; Lin Deng ² ; ¹ Wyeth Pharmaceuticals, Collegeville, PA; ² Wyeth, Collegeville, PA
TP 336	In-Depth Identification of Proteins and Modifications by Multi-Dimensional Protein Separation and LC-MS/MS and MRM Methods; Manfred R. Raida; Rong Li; Kim Huey Ee; Rosalind Yc Tan; Gina YB Tan; Bernad PM Tham; Choon Keow Ng; Experimental Therapeutics Ce, Singapore	TEMPO-Based FRIPS Approach for Gas-Phase Peptide Sequencing; Minhee Lee; Minhyuck Kang; Bongjin Moon; ¹ Han Bin Oh; Sogang University, Dept. of Chemistry, Seoul, South Korea
TP 337	Rapid In-Gel Digestion of Proteins Using Surface Acoustic Waves; Sri H. Ramarathinam ¹ ; Ketav P. Kulkarni ² ; Nicholas A. Williamson ¹ ; James Friend ³ ; Leslie Yeo ³ ; Anthony W. Purcell ¹ ; Patrick Perlmutter ²	Role of Amino Acid Side Chains in Apparent Selective Ring Opening of Cyclic b5 Ions; Sam Molesworth; Sandra M. Osburn; Stephanie Curtice;

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TP 350 **Structure and Fragmentation Pathways of Doubly-Protonated Pro-His-Xxx Tripeptides; Bela Paizs¹; Michaela Knapp-Mohammady¹; Alex G. Harrison²; ¹DKFZ, Heidelberg, Heidelberg, Germany; ²University of Toronto, Toronto, ON**
Michael J. Van Stipdonk; *Wichita State University, Wichita, KS*

TP 351 **Fragmentation Pathways of Non-Tryptic Peptides: Formation of the b_{n-1}+OH Ion; Irina Perdivara^{1,2}; Leesa Deterding¹; Michael Przybylski²; Kenneth B. Tomer¹; ¹NIEHS, RTP, NC; ²Universitat Konstanz, Konstanz, GERMANY**
Hershey; Anastasia Kalli; *Kristina Hakansson; University of Michigan, Ann Arbor, MI*

TP 352 **Experimental and Theoretical Investigation of the Influence of Specific Residues on Formation of b-Type Ions from Protonated Peptides; Stephanie S. Curtice; Sandra M. Osburn; Sam Molesworth; Michael J. Van Stipdonk; Wichita State University, Wichita, KS**
New Improvements and Understandings of the In-Source Decay (ISD) of Peptides in MALDI-TOF Mass Spectrometry; *Kevin Demeure; Valerie Gabelica; Frederic Rosu; Loic Quinton; Edwin Depauw; University of Liege, Liege, Belgium*

TP 353 **Predictions of Dominant Channels in Peptides Mass Spectra Using Density Functional Theory Calculations; Oleg Obolensky; Yi-Kuo Yu; National Center for Biotechnology Information, NLM, Bethesda, MD**
Valence Parity for c/z Ions from ECD of Peptides: Effect of Enzyme Digestion, H₂ Atom Transfer and Charge State; *Yuan Mao^{1,2}; Jeremiah Tipton¹; Greg T. Blakney¹; Chris Hendrickson^{1,2}; Alan G. Marshall^{1,2}; ¹National High Magnetic Field Laboratory, Tallahassee, FL; ²Florida State University, Tallahassee, FL*

TP 354 **A Systematic Study into Phosphopeptide Ionization and Fragmentation; Teresa Allen-Michaud^{1,3}; Chao-Hung Chang²; Adam Profit^{1,2}; Emmanuel Chang^{1,2}; ¹York College/CUNY, Jamaica, NY; ²The Graduate School and University Center/CUNY, New York, NY; ³Queens College/CUNY, Flushing, NY**
Atmospheric Pressure Collection of Peptide fragments after Thermal Dissociation; *Livia S. Eberlin¹; Hao Chen²; R. Graham Cooks^{1,2}; ¹Purdue University, West Lafayette, IN; ²Ohio University, Athens, OH*

TP 355 **Establishing the Mechanism for Dominant c-Ion Formation in Deprotonated C-Terminal Amide Peptides Using Collision-Induced Dissociation; Samantha S. Bokatzian-Johnson; Carolyn J. Cassady; University of Alabama, Tuscaloosa, AL**
A Comparison of Tandem MS Search Algorithms Using Electron Transfer Dissociation Data; *Henrik Molina^{1,2}; Akhilesh Pandey²; Kumaran Kandasamy²; ¹Centre de Regulacio Genomica (CRG), Barcelona, Spain; ²The Johns Hopkins University, Baltimore, MD*

TP 356 **The Theoretical Calculations of Relative Ion Intensities in MSMS Spectra of Doubly Charged Peptides (5 aa and 7 aa long); Tibor Pechan; Steven Gwaltney; Mississippi State University, Mississippi State, MS**
Activated-Ion ETD for Sequence Analysis of Peptides in Low Charge States; *Aaron Ledvina¹; Graeme McAlister¹; Myles Gardner²; Suncerae Smith²; James Madsen²; Jennifer Brodbelt²; Joshua J. Coon^{1,2}; ¹Univ of Wisconsin-Madison, Madison, WI; ²University of Texas - Austin, Austin, TX*

TP 357 **Gas-Phase Basicity Measurements of Singly- and Doubly-Charged bn Fragment Ions Using ESI/FT-ICR MS; Behrooz Zekavat; Abdullah H. Al-fdeilat; Touradj Solouki; University of Maine, Orono, ME**
Implementation of Beam-Type CAD with Ion Trap Product Detection, on a Hybrid QLT-Orbitrap Mass Spectrometer; Large-Scale Comparisons to Resonant Excitation; *Graeme McAlister¹; Doug Phanstiel²; M. Violet Lee³; Craig Wenger²; Joshua J. Coon⁴; ¹The University of Wisconsin, Madison, WI; ²University of Wisconsin, Madison, WI; ³University of Wisconsin-Madison, Madison, WI; ⁴Univ of Wisconsin-Madison, Madison, WI*

TP 358 **Intramolecular Proton Relay Revealed by Substituent Effect and Energy-Resolved Mass Spectrometry; Xudong Yao; Pamela Ann Diego; Hui Jiang; University of Connecticut, Storrs, CT**
Comparison Of Ion Fragmentation Methods For Sequencing Phosphopeptides; *Robert Brown¹; Stephane Houel²; William Old¹; Katheryn Resing¹; ¹University Of Colorado, Boulder,; ²Howard Hughes Medical Instit, Boulder, CO*

TP 359 **Fragmentation of Peptide Ions during Electrospray Ionization; Yu Xia; He Wang; Marco Pazzi; Zheng Ouyang; R. Graham Cooks; Purdue University, West Lafayette, IN**
Electron Capture Dissociation of Non-Covalent (12-crown-4)-Peptide Complex Ions; *Wai Yi Chan¹; Tak-wah Dominic Chan²; ¹The Chinese University of Hong Kong, Hong Kong SAR, China; ²The Chinese Univ. of Hong Kong, Hong Kong Sar, China*

TP 360 **Fragmentation of Singly Protonated Ions via Interaction with Metastable Rare Gas Atoms; Vadym Berkout; MassTech, Inc., Columbia, MD**
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TP 361 **Liquid Chromatography - Electron Transfer Dissociation - Ion Mobility on a Quadrupole Time of Flight Mass Spectrometer; Jeffery M Brown; Steven D Pringle; Iain D G Campuzano; Richard C Chapman; John B Hoyes; WATERS, Manchester, UK**
Autonomous Light-Weight Integrated Direct Sampling Mass Spectrometer for TIC and CWA Detection; *J. Mitchell Wells¹; Miriam Fico¹; Adam Keil¹; Jane Likens¹; Jonell Smith²; Daniel Sutton¹; Bruce Solomon¹; Brent Rardin¹; Garth Patterson¹; Robert J. Noll²; R. Graham Cooks²; Dennis Barket, Jr. ¹; ¹ICx Griffin Analytical Technologies, West Lafayette, IN; ²Purdue University, West Lafayette, IN*

TP 362 **Simplifying Fragmentation Patterns of Multiply Charged Peptides by N-terminal Derivatization and Electron Transfer Collision Activated Dissociation; James Madsen; Jared Shaw; Jennifer Brodbelt; The University of Texas, Austin, TX**
Rapid Mass Spectrometric Detection of Chemical Warfare Agents, Simulants, and Toxic Industrial Chemicals Using a Field-Portable GC-TMS; *Christopher R. Bowerbank; Tiffany C. Wirth; Patricia E. Oliphant; Joseph L. Oliphant; Edgar D. Lee; Douglas W. Later; Torion Technologies Inc., American Fork, UT*

TP 363 **Abundant b Ion Formation in Electron Capture Dissociation of Supercharged Peptides; Neil D**
On-Site Detection of Chemical Warfare Agents by Mass Spectrometry and Ion Mobility Spectrometry; *Yasuo Seto¹; Shintaro Kishi¹; Takeshi Ohmori¹; Mieko*

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Kanamori-Kataoka ¹ ; Kouichiro Tsuge ¹ ; Akihiko Okumura ² ; Yasuaki Takada ² ; Naoya Ezawa ² ; Susumu Watanabe ³ ; Hiroaki Hashimoto ³ ; Masanori Kidara ⁴ ; Kazuya Takahashi ⁴ ; ¹ <i>National Research Institute of Police Science, Kashiba, Japan</i> ; ² <i>Hitachi, Ltd., Kokubunji, Japan</i> ; ³ <i>Hitachi High-Tech Control Systems Co., Hitachinaka, Japan</i> ; ⁴ <i>The Institute of Physical and Chemical Research, Wako, JAPAN</i>	TP 386	Preconcentration and a New Time of Flight Mass Spectrometer; <u>Gareth Roberts</u> ; Gerhard Horner; Nick Bukowski; <i>ALMSCO International, Bridgend, UK</i> Vapor Detection at 1 ppt with Secondary Electrospray Ionization (SESI) and a Single Quadrupole MS; <u>Juan A. Sillerol</u> ¹ ; Juan Rus ¹ ; Juan Fernandez De La Mora ² ; ¹ <i>SEADM, Boecillo, Spain</i> ; ² <i>Yale University - Mechanical Engineering Department, New Haven, CT</i>
TP 375 High Throughput Desorption Electrospray Ionization Analysis of Chemical Warfare Agents in Liquids Using Tandem Mass Spectrometry and Ion Mobility Separation ; <u>Paul A. D'Agostino</u> ; Claude L. Chenier; <i>DRDC Suffield, Medicine Hat, Canada</i>	TP 387	DRUG METABOLISM: QUANTITATION, 387 - 408
TP 376 Monitoring of Diphenylchloroarsine and Diphenylcyanoarsine in Air Using Atmospheric Pressure Chemical Ionization Ion Trap Mass Spectrometry with Direct Air Introduction ; <u>Akihiko Okumura</u> ¹ ; Susumu Watanabe ² ; Hiroaki Hashimoto ² ; Yasuaki Takada ¹ ; Naoya Ezawa ¹ ; Yasuo Seto ³ ; Shintaro Kishi ³ ; ¹ <i>Hitachi, Ltd., Tokyo, Japan</i> ; ² <i>Hitachi High-Tech Control Systems Co., Ibaraki, Japan</i> ; ³ <i>National Research Institute of Police Science, Chiba, Japan</i>	TP 388	Mood Stabilizer-Induced Changes in the Postsynaptic Density Proteome; <u>Dhaval Nanavati</u> ¹ ; Lisa A. Catapano ³ ; Anthony J. Makusky ¹ ; Ayse Dosemeci ² ; Daniel Austin ³ ; Guang Chen ³ ; Husseini K. Manji ³ ; Sanford P. Markey ¹ ; ¹ <i>NIMH/LNT, Bethesda, MD</i> ; ² <i>NINDS/NIH, Bethesda, MD</i> ; ³ <i>NIMH/LMP, Bethesda, MD</i>
TP 377 High-Throughput Walkthrough Portal with Wire Linear Ion-Trap to Detect Improvised Explosive Devices (IEDs) ; Masuyuki Sugiyama; <i>Hitachi, Tokyo, Japan</i>	TP 389	Strategies in Method Development of Rivastigmine and its Metabolite NAP226-90 in Human Plasma by Liquid Chromatography Tandem Mass Spectrometry; <u>Xuejun Peng</u> ; Amara Pinnawala; Rong Yi; Winnie Lui; Eliot Chung; Alison Pyner; Sarah Ostonal; <i>Can Test Ltd, Burnaby, Canada</i>
TP 378 High-Precision Measurements of RDX in C4 by GC/NCI-MS ; <u>Marcela C Najarro</u> ; Greg Gillen; Eric Windsor; <i>NIST, Gaithersburg, MD</i>	TP 390	Morphine Metabolites, Plasma, Quantification, Pharmacokinetic; <u>Vivek V Tummala</u> ; Sherwin Jiang; Robb Harman; Yongdong Zhu; Yuan-shek Chen; Kumar Ramu; <i>QPS, LLC, Newark, DE</i>
TP 379 Evidence for Sulfur Oxidation in the Perhydrolysis of the Chemical Warfare Agent VX ; <u>Andrew M. McAnov</u> ¹ ; J Williams ¹ ; Stephen J Blanksby ² ; Martin R. L. Paine ² ; ¹ <i>Defence Science and Technology Organisation, Melbourne, Australia</i> ; ² <i>University of Wollongong, Wollongong, Australia</i>	TP 391	Determination of Low Concentration of Oxymorphone and 6 β -Hydroxyoxymorphone in Human Plasma by LC-MS/MS; Hongkun Liang; Crystal Nguyen; <u>Hongzhan Chen</u> ; Mojdeh Vahid; Kristen Singleton; Jared Callan; Yongdong Zhu; Yuan-Shek Chen; Kumar Ramu; <i>QPS, LLC, Newark, DE</i>
TP 380 Low Femtomole Detection and Quantification of Ricin in Serum ; <u>David M. Schieltz</u> ¹ ; Sara C. McGrath ¹ ; Lisa G. McWilliams ² ; John R. Barr ¹ ; ¹ <i>Centers for Disease Control and Prevention, Atlanta, GA</i> ; ² <i>Battelle Memorial Institute, Atlanta, GA</i>	TP 392	Simultaneous Determination of Oxycodone, Noroxycodone and Oxymorphone in Human Plasma by Liquid Chromatography Electrospray Ionization Tandem Mass Spectrometry; <u>Rong Yi</u> ; Gina de Boer; Winnie Lui; Hong Zhang; Xuejun Peng; <i>Can Test Ltd, Burnaby, Canada</i>
TP 381 Microfluidic Cell Culture Device Coupled to MALDI-TOF MS for Identification of Microorganisms ; <u>Jeonghoon Lee</u> ; Steven A. Soper; Kermit K. Murray; <i>Louisiana State University, Baton Rouge, LA</i>	TP 393	Complete Opiate Panel by Reversed Phase LC-MS/MS with Electrospray in PIM with High-pH Mobile Phase and Rapid Sample Preparation; <u>Tivadar Farkas</u> ¹ ; Liming Peng ² ; ¹ <i>Phenomenex, Inc., Torrance, CA</i> ; ² <i>Phenomenex Inc., Torrance, CA</i>
TP 382 Detection of Functional Anthrax Edema Factor in Human and Animal Plasma by Liquid Chromatography-Tandem Mass Spectrometry ; <u>Elodie Duriez</u> ¹ ; Pierre L. Goossens ² ; Francois Becher ¹ ; Eric Ezan ¹ ; ¹ <i>CEA, Gif Sur Yvette, France</i> ; ² <i>Institut Pasteur, Paris, France</i>	TP 394	Rapid Method for Identification and Quantitation of Dantrolene and its Metabolite in Plasma Using Two Linear Ion Trap Mass Spectrometers; <u>Julian J. Phillips</u> ¹ ; Julie Horner ¹ ; Dan McKemie ² ; Anne Taylor ² ; Heather Knych ² ; Scott Stanley ² ; ¹ <i>Thermo Fisher Scientific, San Jose, CA</i> ; ² <i>University of California - Davis, Davis, CA</i>
TP 383 The Advantages of MS/MS Typing for Differentiating Between Close Neighbors ; <u>Jane Razumovskaya</u> ; Appavu Sundaram; Seshu Gudlavalleti; Sergey Kurnosenko; Vladimir M. Doroshenko; <i>Science and Engineering Services, Inc., Columbia, MD</i>	TP 395	An Improved HPLC/MSMS Assay for Aprepitant in Plasma Utilizing a Mobile Phase Containing Ethylenediaminetetraacetic acid to Improve Calibration Curve Linearity; <u>Cynthia M. Chavez-Eng</u> ; Ryan Lutz; Marvin Constanzer; Eric Woolf; <i>Merck & Co., West Point, PA</i>
TP 384 Evaluation of Mass-Spectrometry Based Proteomic Approach for Bacterial Identification and Classification Using Blinded Microbial Samples ; <u>Rabih Jabbour</u> ¹ ; Jacek P. Dworzanski ² ; Samir Deshpande ³ ; Charles H. Wick ⁴ ; Michael F. Stanford ⁴ ; Alan W. Zulich ⁴ ; ¹ <i>SAIC INC., Apg, MD</i> ; ² <i>SAIC, Bel Air, MD</i> ; ³ <i>Science & Technology Corporation, Edgewood, MD</i> ; ⁴ <i>Edgewood chemical biological Center, APG, MD</i>	TP 396	Stabilization of Troglitazone Extracts with Ascorbic Acid for the LC/MS/MS Analysis of Blood and Plasma Samples; <u>Bahanu Habulihaz</u> ; Gino M. Salituro; Lawrence Colwell; Lucinda Cohen; <i>Merck & CO. INC., Rahway, NJ</i>
TP 385 On-Line analysis of Airborne Trace Level Toxic Chemicals Using Thermal Desorption		Overcoming Challenges in Developing a Rugged LC-MS/MS Method for Mycophenolate Mofetil and Mycophenolic Acid in Human Plasma; <u>Nick Peng</u>

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TP 397	Iffat Balkhi; Justine Lam; Nicola Hughes; <i>Biovail Contract Research, Toronto, Canada</i> Quantification of Sirolimus in Human Whole Blood by LC-MS/MS ; Hongkun Liang; Crystal Nguyen; <u>David J Quirico</u> ; Jamie Zhao; Yongdong Zhu; Yuan-shek Chen; Kumar Ramu; <i>QPS, LLC, Newark, DE</i>	TP 398	Iffat Balkhi; Justine Lam; Nicola Hughes; <i>Biovail Contract Research, Toronto, Canada</i> Quantification of Naringinen, Bergamottin, and 6',7'-dihydroxybergamottin- Three Major Components in Grapefruit Juice by LC-MS/MS ; <u>Yafei Xu</u> ; Jing Ke; Harry Zhao; Zhongping John Lin; <i>Frontage Laboratories, Inc., Malvern, PA</i>	TP 399	Iffat Balkhi; Justine Lam; Nicola Hughes; <i>Biovail Contract Research, Toronto, Canada</i> Simultaneous Determination of Tolbutamide, Omeprazole, Midazolam and Dextromethorphan by LC-MS/MS – A High Throughput Approach to Evaluate Drug-Drug Interactions ; Wei Zhang ¹ ; <u>Futian Han</u> ¹ ; Ping Guo ¹ ; Harry Zhao ¹ ; Zhongping (John) Lin ¹ ; Mike-Qingtao Huang ² ; Naidong Weng ² ; ¹ <i>Frontage Laboratories, Inc., Malvern, PA</i> ; ² <i>Johnson & Johnson PRD, Raritan, NJ</i>	TP 400	Iffat Balkhi; Justine Lam; Nicola Hughes; <i>Biovail Contract Research, Toronto, Canada</i> Quantification of Itraconazole and Its Metabolite Hydroxyitraconazole in Human Plasma by LC-MS/MS ; Venkatraman Junnotula; Hongli Wang; Lina Tang; Angel Tseng; Yuwen Zhao; Jamie Zhao; Yuan-Shek Chen; Kumar Ramu; <i>QPS, LLC, Newark, DE</i> An LC MS/MS Assay of the “Pittsburgh Cocktail”: Six CYP Probe-Drug/Metabolites from Human Plasma and Urine Using Standard Isotope Dilution ; <u>Nicolas A. Stewart</u> ¹ ; Thomas P. Conrads ² ; Robert A. Branch ¹ ; ¹ <i>University of Pittsburgh, Center for Clin. Pharm., Pittsburgh, PA</i> ; ² <i>University of Pittsburgh, Cancer Institute, Pittsburgh, PA</i>	TP 401	Iffat Balkhi; Justine Lam; Nicola Hughes; <i>Biovail Contract Research, Toronto, Canada</i> Method Development Strategy in the Analysis of Testosterone by LC-FAIMS-MS/MS ; <u>Kimberly Dunn-Meynell</u> ; Sam Wainhaus; Walter Korfischer; <i>Schering-Plough, Kenilworth, NJ</i>	TP 402	Iffat Balkhi; Justine Lam; Nicola Hughes; <i>Biovail Contract Research, Toronto, Canada</i> Quantitative Analysis of 17-Desacetyl Norgestimate in Human Plasma By LC MS/MS ; <u>Colin Patrick</u> ; Yongdong Zhu; Yuan-shek Chen; Jerry Cao; Hongzhuhan Chen; Kelly Whetstone; Kumar Ramu; <i>QPS, LLC, Newark, DE</i>	TP 403	Iffat Balkhi; Justine Lam; Nicola Hughes; <i>Biovail Contract Research, Toronto, Canada</i> The Combined Quantitation of Two Challenging Compounds, Fluticasone and Salmeterol, on a New Tandem Mass Spectrometer ; <u>Edward Brewer</u> ² ; Min Meng ² ; Patrick Bennett ² ; Spencer Carter ² ; George Scott ¹ ; Robert Horton ^{2,2} ; Gerard Dalglash ^{2,2} ; ¹ <i>Ionics Mass Spectrometry Group, Bolton, Canada</i> ; ² <i>Tandem Labs, Levittown, PA</i>	TP 404	Iffat Balkhi; Justine Lam; Nicola Hughes; <i>Biovail Contract Research, Toronto, Canada</i> Determination of Bicalutamide in Human Plasma by Liquid Chromatography-Tandem Mass Spectrometry (LC-MS/MS) ; <u>Jun-hwa Shim</u> ; Hwa Suk Kim; Seul Oh; Hyang Hee Yang; Won Seok Nam; Seon Jeong Kim; Seo Hyun Yoon; Kyung-Sang Yu; In-Jin Jang; <i>Seoul National University, Seoul, South Korea</i>	TP 405	Iffat Balkhi; Justine Lam; Nicola Hughes; <i>Biovail Contract Research, Toronto, Canada</i> Simultaneous Determination of Udenafil and its Active Metabolite, DA-8164, in Free Fraction Human Plasma by LC-ESI/MS/MS ; <u>Hwa Suk Kim</u> ; Seul Oh; Jun-Hwa Shim; Hyang Hee Yang; Won Seok Nam; Seon Jeong Kim; Seo Hyun Yoon; Kyung-Sang Yu; In-Jin Jang; <i>Seoul National University, Seoul, South Korea</i>	TP 406	Iffat Balkhi; Justine Lam; Nicola Hughes; <i>Biovail Contract Research, Toronto, Canada</i> Determination of Rifabutin and 25-O-Deacetyl Rifabutin in Human Plasma by LC/MS/MS ; Hongkun Liang; <u>Crystal Nguyen</u> ; Mojdeh Vahid; Yongdong Zhu; Jamie Zhao; Kristen Singleton; Preeta Bissessar; Yuan-Shek Chen; Kumar Ramu; <i>QPS, LLC., Newark, DE</i>	TP 407	Iffat Balkhi; Justine Lam; Nicola Hughes; <i>Biovail Contract Research, Toronto, Canada</i> The Quantitative Analysis of Voriconazole in Human Plasma by Liquid Chromatography-Tandem Mass	TP 397	Iffat Balkhi; Justine Lam; Nicola Hughes; <i>Biovail Contract Research, Toronto, Canada</i> Spectrometry (LC-MS/MS) ; <u>Seo Hyun Yoon</u> ; Jun-hwa Shim; Hwa Suk Kim; Seul Oh; Hyang Hee Yang; Won Seok Nam; Seon Jeong Kim; Kyung-Sang Yu; In-Jin Jang; <i>Seoul National University, Seoul, South Korea</i>	TP 409	DRUG METABOLISM: PHARMACOKINETICS, 409 - 423 Identification of Urinary Metabolites of Tolcapone, an Inhibitor of Catechol-O-methyl Transferase, by LC/MS-based Metabonomics Analysis ; <u>Jinchun Sun</u> ¹ ; Laura K. Schnackenberg ¹ ; Linda S. Von Tuneln ¹ ; Frederick A. Beland ¹ ; Marja-Leena Toivonen ² ; Wade Hines ³ ; Richard D. Beger ^{1,1} <i>NCTR, Jefferson, AR</i> ; ² <i>Orion Pharmaceuticals, Espoo, Finland</i> ; ³ <i>BG Medicine, Waltham, WA</i>	TP 410	A Highly Effective and Sensitive LC-MS/MS Assay for Itraconazole and Hydroxy-Itraconazole in Human Plasma for Bioequivalence, Bioavailability and Pharmacokinetic Studies ; <u>Wei Zhang</u> ¹ ; <u>Futian Han</u> ¹ ; Harry Zhao ¹ ; Zhongping (John) Lin ¹ ; Guillermo Tous ² ; ¹ <i>Frontage Laboratories, Inc., Malvern, PA</i> ; ² <i>Stiefel Laboratories, Inc., Princeton, NJ</i>	TP 411	Pharmacokinetic Analysis of Di(2-ethylhexyl)phthalate (DEHP) and its Major Metabolites in Plasma and Urine using UPLC with ES/MS/MS ; <u>Nathan C. Twaddle</u> ; Steven J. Moon; Luisa Camacho; K. Barry Delclos; Daniel R. Doerge; <i>NCTR/FDA, Jefferson, AR</i>	TP 412	Plasma Pharmacokinetics of NSC 265959, a Novel 3,11-Diazasteroid, in Mice ; <u>Lawrence R. Phillips</u> ¹ ; John P. Carter ² ; Eva Majerova ² ; Dianne L. Newton ² ; Melinda G. Hollingshead ¹ ; ¹ <i>National Cancer Institute at Frederick, Frederick, MD</i> ; ² <i>SAIC-Frederick, Inc., Frederick, MD</i>	TP 413	Metabolism and Pharmacokinetics of Oxazoles with anti-Tuberculosis Activity ; <u>Yang Song</u> ; Valentina Petukhova; Larry. L Klein; Richard B. Van Breemen; scott Franzblau; <i>university of Illinois, Chicago, IL</i>	TP 414	Determination of Dexamethasone to 13 pg/g (mL) in Ocular Fluids and Tissues following Unilateral, Topical Administration ; <u>Matthew Marchewka</u> ; Hillary Decker; Michael Wynalda; Wasser Carol; James Vrbanac; <i>PharmOptima, Portage, MI</i>	TP 415	In vitro Metabolic Interactions between Black Cohosh (Cimicifuga racemosa) and Tamoxifen ; <u>Jinghu Li</u> ; Tanja Gödecke; Shaonong Chen; Guido F. Pauli; Richard B. van Breemen; Dejan Nikolic; <i>University of Illinois College of Pharmacy, Chicago, IL</i>	TP 416	24 High Throughput LTD-MS/MS IC50 Determination of CYPinhibition in Human Liver Microsomes (HLM) ; <u>Patrice Tremblay</u> ¹ ; Pierre Picard ¹ ; Limin He ² ; Jae Chang ² ; Jane Huang ² ; ¹ <i>Phytronix Technologies, Quebec, Canada</i> ; ² <i>DMPK, Roche Palo Alto, Palo Alto, CA</i>	TP 417	PD/PK Characterization of Drug Release From Nanoparticles Independent of Formulation: Acute Pharmacokinetics and Cardiovascular Effects of Intravenous Nifedipine ; <u>James Vrbanac</u> ¹ ; Steven Humphrey ¹ ; Michael Wynalda ¹ ; Allen Buhl ¹ ; Mike Morgan ² ; ¹ <i>PharmOptima, Portage, MI</i> ; ² <i>Bend Research, Inc, Bend, Oregon</i>	TP 418	Quantitation of Drug Candidates in Pharmacokinetic Studies Using High Resolution Accurate MS – A Different Approach for Bioanalysis ; <u>Rena Zhang</u> ¹ ; Sean Yu ² ; Philip Tiller ³ ; Suzie Yeh ⁴ ; Elizabeth A. Mahan ² ; William Bart Emary ⁵ ; ¹ <i>Merck & Co., Inc, West Point, PA</i> ; ² <i>Merck & Co., West Point, PA</i> ; ³ <i>RMI</i>
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TP 419	<i>laboratories, Collegeville, PA; ⁴Merck & Co., Inc., West Point, PA; ⁵Merck Research Labs, West Point, PA</i> Quantitation of Small Molecules with Simultaneous Structural Characterization of Metabolites using High Resolution Mass Spectrometry for Accelerating Drug Discovery; <u>Melis Coraggio</u> ¹ ; Young Shin ² ; Jonathan C. Mcnally ³ ; Sheerin Shahidi ² ; Yan Chen ³ ; Yingying Huang ⁴ ; Cornelis Hop ⁵ ; Patrick J. Rudewicz ¹ ; ¹ Genentech, Inc., South San Francisco, CA; ² Genentech, South San Francisco, CA; ³ ThermoFisher Scientific, San Francisco, CA; ⁴ Thermo Fisher Scientific, San Jose, CA; ⁵ Genentech, South San Francisco, CA	TP 428	Tandem MS with a Label Reduction Strategy Enables a Proteomics Approach to H/DX Experiments; Andrew Percy; <u>David Schriemer</u> ; University of Calgary, Calgary, Canada
TP 420	Why a Q-TOF Mass Spectrometer Could Detect Homspera® More Than Two Orders of Magnitude Lower Than a Triple Quadrupole; <u>Earl L. White</u> ¹ ; Veronica P. Rodriguez ¹ ; Kenyon Hood ^{1,2} ; Kasey Benson ³ ; Hal Siegel ³ ; ¹ MDx BioAnalytical, Inc., Tucson, AZ; ² Ventana Medical Systems, Inc., Tucson, AZ; ³ ImmuneRegen BioSciences, Inc, Scottsdale, AZ	TP 429	Deuterium Exchange Mass Spectrometry Using a Semiautomatic Interface for Data Acquisition and Automatic Data Analysis and Reporting; <u>Maria T. Villar</u> ; Danny E. Miller; Aron W. Fenton; Antonio Artigues; University of Kansas Medical Center, Kansas City, KS
TP 421	An Improved Predicted MRM Method for <i>in vivo</i> Metabolite Detection Method Using a Hybrid LIT/Triple Quadrupole Mass Spectrometer; <u>Hua-fen Liu</u> ¹ ; Elliott Jones ¹ ; Robert Cho ² ; Ji Ma ³ ; ¹ Applied Biosystems, Foster City, CA; ² Amgen, Inc, South San Francisco, CA; ³ Amgen Inc., South San Francisco, CA	TP 430	Towards a Standardized Approach in Presenting Hydrogen-Deuterium Exchange Mass Spectrometry (HDX MS) Data in Comparability Studies of Biopharmaceutical Products; Cedric Bobst ¹ ; Rinat Abzalimov ¹ ; Damian Houde ^{2,3} ; Marek Kloczewiak ² ; <u>Steven A. Berkowitz</u> ² ; John R. Engen ³ ; Igor A. Kaltashov ¹ ; ¹ University of Massachusetts, Amherst, MA; ² Biogen Idec, Inc., Cambridge, MA; ³ Northeastern University, Boston, MA
TP 422	Simultaneous Pharmacokinetic Quantitation and Metabolic Identification Using pMRM Survey Mode on a High Scan Rate QqQ/LIT LCMS; <u>Rolf Kern</u> ; Theresa Lee; Richard Lauman; Elliott Jones; Dale H. Patterson; Loren Olson; <i>Applied Biosystems, San Jose, CA</i>	TP 431	ESI-MS Identifies Protein Oxidation as Major Contributor to Irreversible Thermal Denaturation; <u>Jenna-Jiangjiang Liu</u> ; Lars Konermann; Univ. of Western Ontario, London, ON
TP 423	Development of a HPLC-MS/MS Assay to Measure the Novel Proteasome Inhibitor CEP-18770 in Plasma. Preliminary Pharmacokinetic Evaluation in Cancer Patients; <u>Elena Marangon</u> ¹ ; Federica Sala ¹ ; Cristiana Sessa ³ ; Elisa Dall'O ² ; Roberta Cereda ⁴ ; Valeria Livi ⁴ ; Maurizio D'Incalci ¹ ; Massimo Zucchetti ¹ ; ¹ Istituto di Ricerche Farmacologiche Mario Negri, Milano, Italy; ² SENDO, Milano, Italy; ³ Istituto Oncologico della Svizzera Italiana, Bellinzona, Switzerland; ⁴ EOS, Milano, Italy	TP 432	A New Approach to Assessing Conformational Stability and Functional Competence of Protein Therapeutics using Mass Spectrometry; Cedric Bobst ¹ ; Rinat Abzalimov ¹ ; Damian Houde ² ; Steven A. Berkowitz ² ; Rohin Mhatre ² ; <u>Igor A. Kaltashov</u> ¹ ; ¹ University of Massachusetts, Amherst, MA; ² Biogen Idec, Inc., Cambridge, MA
TP 424	PROTEIN CONFIRMATION, 424 - 456 Characterization of a Microfabricated Electrospray Ionization (ESI) Device for Solution-Phase H/D Exchange in Non-Denaturing Media; <u>Abdullah H. Al-Fedilat</u> ; Behrooz Zekavat; Scott D. Collins; Rosemary Smith; Touradj Solouki; University of Maine, Orono, ME	TP 433	Protein Equilibrium Population Snapshot (PEPS) MS Method for Measuring Protein Folding Energies Using H/D exchange and Oxidation of Methionine; <u>Rohana Liyanage</u> ; Nagarjuna Devarapalli; Latisha M. Puckett; N.H. Phan; Joel A. Starch; Jennifer Gidden; Wesley E. Stites; Jackson O. Lay; University of Arkansas, Fayetteville, AR
TP 425	Investigation of Rapid Two-Dimensional Peptic Peptide Fractionation for HD Exchange by Nano-LC MALDI; <u>Wayne Chou</u> ; Nicholas Sam-Soon; Tom Poulos; Paul Gershon; UC-Irvine, Irvine, CA	TP 434	His-HDX Method to Probe the Microenvironment of Histidine Residues in <i>Escherichia coli</i> Dihydrofolate Reductase; <u>Masaru Miyagi</u> ; Chris Dealwis; Case Western Reserve Univers, Cleveland, OH
TP 426	Reduced Back-Exchange by Modified RPLC Mobile Phase Separation of Proteolytic Peptides for MS Analysis of H/D Exchange of Solution-Phase Proteins; <u>Santosh G Valeja</u> ^{1,2} ; Mark R. Emmett ^{1,2} ; Alan G. Marshall ^{1,2} ; ¹ Natl'l High Magnetic Field Lab, Tallahassee, FL; ² Florida State university, Tallahassee, FL	TP 435	Metal-Catalyzed Hydrogen/Deuterium Exchange and MS as a New Way to Determine Metal-Protein Binding Sites; <u>Adam M Graichen</u> ; Richard Vachet; University of Massachusetts, Amherst, MA
TP 427	H/D Exchange Combined with Top-Down Electron Capture Dissociation for Protein Complex Structural Characterization: Development and Early Results; Magalie Duchateau; Charlotte Boisseau; Julia Chamorro; <u>Guillaume Van Der Rest</u> ; Ecole Polytechnique, Palaiseau, France	TP 436	Structural and Dynamic Investigation of <i>umuD</i> Gene Products by Hydrogen Exchange Mass Spectrometry; <u>Jing Fang</u> ; Penny J. Beuning; John R. Engen; Northeastern University, Boston, MA
TP 428		TP 437	Differences in Structural Dynamics of Factor VIII and Lactadherin C2 Domains in Relation to Membrane Binding Employing DXMS Analysis; <u>Dennis Pantazatos</u> ³ ; Virgil Woods, Jr. ⁵ ; Gary E. Gilbert ^{1,2} ; Chris Gessner ⁴ ; ¹ VA Boston Health Care System, West Roxbury, MA; ² Brigham and Women's Hospital, Boston, MA; ³ Harvard Medical School, Boston, MA; ⁴ Ohio State University, Columbus, OH; ⁵ University of California, La Jolla, CA
TP 429		TP 438	The Interaction of Myristoylated HIV Nef with N-Myristoyltransferase-1 as Determined by Hydrogen Exchange Mass Spectrometry; <u>Chris Morgan</u> ¹ ; Purushottam S. Narute ² ; Brian V. Miglionico ¹ ; Thomas E. Smithgall ² ; John R. Engen ¹ ; ¹ Northeastern University, Boston, MA; ² University of Pittsburgh, Pittsburgh, PA
		TP 439	Conformational Dynamics of the Transcription Regulator VraR are Modulated by Phosphorylation;

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		A Hydrogen/Deuterium Exchange ESI-MS Study; Yu-Hong Liu¹; Antoaneta Belcheva²; Dasantila Golemi-Kotra²; Lars Konermann¹; ¹<i>The University of Western Ontario, London, Canada; ²York University, Toronto, Canada</i>		G. Marshall ¹ ; ¹ <i>Nat'l High Magnetic Field Lab/Florida State Univ., Tallahassee, FL; ²Albert Einstein College of Medicine, Bronx, NY</i>
TP 440		HIV-1 Vif Conformation Upon Phosphorylation by MAPK and Its Implications in Elongin-BC Binding; Sean R. Marcisin¹; John R. Engen; Northeastern University, Boston, MA	TP 451	Folding of the Protein Cex in Solution and in the Gas Phase Studied by Hydrogen/Deuterium Exchange; Peran Terrier; D. J. Douglas; University of British Columbia, Vancouver, BC
TP 441		Post-Translational Modifications Alter Intact IgG1 Conformation and Influence Fc-Gamma-RIII Binding; Damian Houde^{1,2}; Steven Berkowitz¹; John R. Engen²; ¹<i>Biogen Idec, Inc., Cambridge, MA; ²Northeastern University, Boston, MA</i>	TP 452	Investigation of Transferrin/Transferrin Receptor Interaction by Hydrogen-Deuterium Exchange Mass Spectrometry (HDX MS); Cedric Bobst¹; Anne B. Mason²; Igor A. Kaltashov¹; ¹<i>University of Massachusetts, Amherst, MA; ²University of Vermont Medical School, Burlington, VT</i>
TP 442		Protein Dynamics of Peroxiredoxins Studied by Hydrogen/Deuterium Exchange Mass Spectrometry; Sasidhar N Nirudodhi; Claudia Maier; Oregon State University, Corvallis, OR	TP 453	Study of the Conformation of Myoglobin Adsorbed on Nanoparticles with Hydrogen/Deuterium Exchange Mass Spectrometry; Yaoling Long; David Barber; John R. Eyler; University of Florida, Gainesville, FL
TP 443		Dynamic Studies and Structural Delineation of Truncated Human Cardiac Troponin Using HDX; Dev Kowlessur; Larry Tobacman; University of Illinois, Chicago, IL	TP 454	Hydrogen/Deuterium Exchange Analysis of RXR-Rexinoid Interactions in the Presence and Absence of Coactivator GRIP-1; LeeAnn J. Boerma¹; Gang Xia¹; Cheng Qui¹; Donald D. Muccio¹; Matthew B. Renfrow²; ¹<i>UAB at Birmingham, Birmingham, AL; ²University of Alabama at Birmingham, Birmingham, AL</i>
TP 444		Isotopic Depletion for the Structural Mapping of the Troponin Complex by Hydrogen/Deuterium Exchange Combined with FT-ICR Mass Spectrometry; George M. Bou-assaf^{1,2}; Jean E. Chamoun^{2,3}; Mark R. Emmett^{1,2}; Piotr G. Fajer^{2,4}; Alan G. Marshall^{1,2}; ¹<i>Ion Cyclotron Resonance Prog, Tallahassee, FL; ²NHML/FSU, Tallahassee, FL; ³Department of Chemistry, Macquarie University, Sydney, Australia; ⁴Institute of Molecular Biophysics / FSU, Tallahassee, FL</i>	TP 455	Probing the Effects of GTP Hydrolysis State on the Conformation of RhoA Using HDX MS; Madonna-Lily Choi; Michael P. Walsh; John K. Chik; University of Calgary, Calgary, Canada
TP 445		How Do the Four Keys (Ca²⁺) Change the World? A PLIMSTEX Study of Troponin C; Richard Yu-cheng Huang; Don L. Rempel; Michael L. Gross; Washington University, St.louis, MO	TP 456	Probing Host-Guest Complex Formation between Cyclodextrins and Pharmaceutical Drugs Using Hydrogen-Deuterium Exchange; Adedamola Onipede; Christian Granados; Jon Robinson; Xiomara Soto; David Sierra; Dil Ramanathan; Kean University, Union, NJ
TP 446		Accelerated Protein Folding due to Chaperone Action is Revealed by SUPREX; Stefan Esswein¹; Hannah Florance²; Perdita Barran²; ¹<i>University of Edinburgh, Edinburgh, UK; ²The University of Edinburgh, Edinburgh, UK</i>		NON-COVALENT INTERACTIONS, 457 - 486
TP 447		Analysis of Histone Dynamics in the Higher Order Folding of Nucleosome Arrays Using Hydrogen/Deuterium Exchange Coupled to Mass Spectrometry; Tanya Panchenko¹; Sandya Ajith¹; Mike Resch²; Jeffrey C. Hansen²; Ben E. Black¹; ¹<i>University of Pennsylvania, Philadelphia, PA; ²Colorado State University, Fort Collins, Colorado</i>	TP 457	ETD Dissociation of the Non-Covalent Complexes between Calmodulin and Dopamine or Adenosine A2A Receptor Epitopes; Amina S. Woods¹; Sucharita Dutta²; Shelley N Jackson³; ¹<i>NIDA IRP, NIH, Baltimore, MD; ²Thermo Fisher Scientific, San Jose, CA; ³NIDA IRP, NIH, Baltimore, MD</i>
TP 448		Structural Mass Spectrometry of the $\alpha\beta$-Tubulin Dimer Supports a Revised Model of Microtubule Assembly; Melissa J. Bennett¹; John Chik¹; Gordon Slysz¹; Tyler Luchko²; Dan L. Sackett³; David Schriemer¹; ¹<i>University of Calgary, Calgary, AB; ²Cross Cancer Institute, Edmonton, Canada; ³National Institutes of Health, Bethesda, MD</i>	TP 458	Identifying the Sites of Small Molecules and Amyloid Beta-Protein Noncovalent Interactions Using Top-Down Mass Spectrometry; Eric Pang¹; David B. Teplow²; Joseph A. Loo¹; ¹<i>UCLA, Los Angeles, CA; ²David Geffen School of Medic, Los Angeles, CA</i>
TP 449		Allosteric Effects in the Abl Kinase Upon Inhibitor Binding; Roxana E. Jacob^{1,3}; Jianming Zhang²; Nathanael S. Gray²; John R. Engen^{1,3}; ¹<i>Northeastern University, Boston, MA; ²Dana- Farber Cancer Institute, Harvard Medical, Boston, MA; ³Barnett Institute, Boston, MA</i>	TP 459	Enhanced Stoichiometry Measurements of Heterogeneous sub-MDa Protein Assemblies by Tandem MS: Elucidation of Subunit Exchange Mechanism in GroEL; Rinat Abzalimov¹; Sarah C. Wehri²; George H. Lorimer²; Igor A. Kaltashov¹; ¹<i>University of Massachusetts, Amherst, MA; ²University of Maryland College Park, College Park, MD</i>
TP 450		Identification of an Allosteric Pathway in the Regulation of α-Isopropylmalate Synthase from Mycobacterium Tuberculosis by Solution-phase H/D Exchange FT-ICR MS; Mark R. Emmett¹; Hui-Min Zhang¹; Patrick A. Frantom²; John S. Blanchard²; Alan	TP 460	How Bacteria Defend Themselves Against Pathogens: The Structure and Topology of the Cascade Protein Complex Revealed by Macromolecular Mass Spectrometry; Kristina Lorenzen¹; Esther Van Duijn¹; Arjan Barendregt¹; Stan Brouns²; Matthijs Jore²; John van der Oost²; Albert J.R. Heck¹; ¹<i>Utrecht University, Utrecht, Netherlands; ²Wageningen University, Wageningen, Netherlands</i>
			TP 461	Mass Spectrometry Study of the Interaction Between Calmodulin And ERα17p, a Peptide that Corresponds to the Estrogen Receptor α/Calmodulin-Binding Site; Sandrine Voillard¹; Francoise Fournier¹; Carlos Afonso¹; Yves Jacquot¹; Guy Leclercq²; Jean-Claude Tabet¹; ¹<i>University Paris VI (UPMC), Paris</i>

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TP 462	<i>Cedex O5, France; ²Institut Jules Bordet, Brussels, Belgium</i> Probing the Solution Structure of TNF-α Homo- and Heterotrimers Before and After Complex Perturbation; <u>Eric Beil</u> ; Sheng-Jiun Sam Wu; George A. Heavner; Jennifer F. Nemeth; <i>Centocor R&D, Radnor, PA</i>	TP 474	Solution-Phase Chelators for the Suppression of Nonspecific Metal-Protein Interactions in ESI-MS; <u>Jingxi Pan</u> ; Lars Konermann; <i>Univ. of Western Ontario, London, ON</i>
TP 463	Small Heat Shock Proteins (sHSPs) are Thermodynamically Regulated Molecular Chaperones with Polydisperse Substrate Binding Behaviour; <u>Florian Stengel</u> ¹ ; Alex J Painter ¹ ; Andrew J Baldwin ² ; Nomalie Jaya ³ ; Eman Basha ³ ; Lewis E Kay ² ; Elizabeth Vierling ³ ; Carol V Robinson ¹ ; Justin LP Benesch ¹ ; ¹ <i>University of Cambridge, Cambridge, UK; ²University of Toronto, Toronto, Canada; ³University of Arizona, Tucson, Arizona</i>	TP 475	Quantitating Zinc Deposition in the ESI Source during Zinc-Peptide Analysis; <u>Haritha Mattapalli</u> ; Colin S. Burns; <u>Allison S. Danell</u> ; <i>East Carolina University, Greenville, NC</i>
TP 464	Application of CE-MS to the Determination of Autoinducer Inactivation Enzyme A-metal Stoichiometry; <u>Mehdi Moini</u> ¹ ; Selynda Garza ² ; ¹ <i>Texas State University, San Marcos, TX; ²Cedra Corp, Austin, TX</i>	TP 476	Energy and Entropy Effects in the Dissociation of Non-Covalent Ionic Polymer/Substrate Complexes; <u>Eric Martineau</u> ; Abdulrahman Alhazmi; Justin Renaud; <u>Paul Michael Mayer</u> ; <i>University of Ottawa, Ottawa, Canada</i>
TP 465	Structures and Binding Energies of Noncovalent Complexes of Peptidomimetic Complexes of Protonated Nitrogen Bases with 18-Crown-6; <u>Yu Chen</u> ; Mary T. Rodgers; <i>Wayne State University, Detroit, MI</i>	TP 477	Monitoring Polymer Growth in the Interior of a Protein-Cage and Overcoming Challenges in Assigning Charge States to Native-Spray Mass Spectra; <u>Lars Liepold</u> ; Luke Oltrogge; Joynal Abedin; Peter Suci; Mark Young; Trevor Douglas; <i>Montana State University, Bozeman, MT</i>
TP 466	Investigation of Non-covalent Complexes Between Synthetic Polymers and Biomolecules Using Mass Spectrometry; <u>Daniela Smiljanic</u> ; Chrys Wesdemiotis; <i>The University of Akron, Akron, OH</i>	TP 478	From Metal Binding to Nanoparticle Formation: Monitoring Biomimetic Iron Oxide Synthesis within Protein Cages Using Mass Spectrometry; <u>Sebyung Kang</u> ^{1,2} ; Craig C. Jolley ^{1,2} ; Lars O. Liepold ^{1,2} ; Mark Young ^{1,2} ; Trevor Douglas ^{1,2} ; ¹ <i>Montana State University, Bozeman, MT; ²Center for BioInspired Nanomaterials, Bozeman, MT</i>
TP 467	Non-Covalent Interactions between the PEBP/RKIP Protein and Nucleotide Analogs; <u>Lucie Jaquillard</u> ¹ ; Guillaume Gabant ¹ ; Françoise Schoentgen ² ; Luigi Agrofoglio ³ ; <u>Martine Cadene</u> ¹ ; ¹ <i>CBM CNRS UPR4301 (INC) Rue Charles Sadron, Orléans, France; ²IMPMC, Université de Paris 6, Paris, France; ³ICOA UMR6005 Université d'Orléans, Orléans, France</i>	TP 479	Why do Mass Spectrometric Measurements of Noncovalent Binding Constants Give Accurate Results? <u>Renato Zenobi</u> ¹ ; Matthias C Jecklin ¹ ; Rui Wang ¹ ; David Touboul ² ; ¹ <i>ETH Zurich, Zurich, Switzerland; ²CNRS, Gif-sur-Yvette, France</i>
TP 468	Comprehensive Analysis of the TRAP-Anti-TRAP Complex by ESI-MS and X-Ray Crystallography; <u>Satoko Akashi</u> ¹ ; Masahiro Watanabe ¹ ; Jonathan G. Heddle ^{1,2} ; Satoru Unzai ¹ ; Sam-Yong Park ¹ ; Jeremy R. H. Tame ¹ ; ¹ <i>Yokohama City University, Yokohama, Kanagawa, Japan; ²Global Edge Inst., Tokyo Institute of Technology, Yokohama, Japan</i>	TP 480	Determination of Protein-Ligand Binding Constants Using Mass Spectrometry and Validation Using Surface Plasmon Resonance and Isothermal Titration Calorimetry; <u>Matthias Jecklin</u> ¹ ; Stefan Schauer ² ; Christoph Dumelin ³ ; Renato Zenobi ⁴ ; ¹ <i>ETH Zürich, Zürich, Switzerland; ²Functional Genomics Center Zürich, Zürich, Switzerland; ³Philochem AG, Zürich, Switzerland; ⁴ETH Zurich, Zurich, Switzerland</i>
TP 469	Withdrawn	TP 481	Determination of Dimerization Constants of CH3-CH3 Interactions in IgG4 Antibodies by Native Mass Spectrometry; <u>Rebecca J. Rose</u> ¹ ; Aran F. Labrijn ² ; Ewald T.J. van den Bremer ² ; Janine Schuurman ² ; Patrick H.C. van Berkel ² ; Paul W.H.I. Parren ² ; Albert J.R. Heck ¹ ; ¹ <i>Utrecht University, Utrecht, Netherlands; ²Genmab, Utrecht, Netherlands</i>
TP 470	Non-Covalent Interactions between Food-Derived Proteins and Polyphenols Assessed by Ultra-Filtration and Mass Spectrometry – a Matter of Bioavailability and Perception; <u>Kornel Nagy</u> ; Marie-Claude Courtet-Compondu; Martin Kussmann; <i>Nestle Research Center, Lausanne 26, Switzerland</i>	TP 482	Mass spectrometry Contribution for Stability Constants Measurement of Protein/Protein Complexes; Aurélie Même ¹ ; Peran Terrier ¹ ; Frank Hannemann ² ; Rita Bernhardt ² ; Hélène Nierengarten ¹ ; Noelle Potier ¹ ; <u>Emmanuelle Leize-Wagner</u> ¹ ; ¹ <i>LDSM2 - Institut de Chimie-CNRS-ULP, Strasbourg, France; ²Biochemie Universität des Saarlandes, Saarbrücken, Germany</i>
TP 471	CCR2 Di-Sulfated N-Terminal Peptide and Arixtra Bind Competitively to MCP-1/CCL2; <u>Connie Jen</u> ; Julie A. Leary; <i>UC Davis, Davis, CA</i>	TP 483	Imaging of Noncovalent Complexes by MALDI-MS; <u>Shelley N Jackson</u> ¹ ; Amina S. Woods ² ; ¹ <i>NIDA-IRP, NIH, Baltimore, MD; ²NIDA IRP, NIH, Baltimore, MD</i>
TP 472	Characterization and Structure Elucidation by FT-ICR-MSMS and NMR of a Protein-Complex Contaminant Produced from a 96 Well-Plate Cover Adhesive; <u>Marshall M. Siegel</u> ; Xidong Feng; Franklin Moy; Walter Massefski; Brooke Swalm; Mehul Patel; Lee Jennings; <i>Wyeth Research, Pearl River, NY</i>	TP 484	Analysis of Non-covalent Chitinase-Chito-Oligosaccharide Complexes by Use of Nano-ESI and IR-MALDI Mass Spectrometry; <u>Anne Line Norberg</u> ¹ ; Anette Israelsen Dybvik ² ; Veronika Schute ³ ; Michael Mormann ³ ; Jens Soltwisch ³ ; Klaus Dreisewerd ³ ; Stefan Berkenkamp ⁴ ; Jasna Peter-Katalinic ³ ; Kjell Morten Vårum ² ; Vincent G. H. Eijssink ¹ ; Morten Sørlie ¹ ; ¹ <i>Norwegian University of Life Sciences, Aas, Norway; ²Norwegian University of Science and Technology</i>
TP 473	Spatially Ordered Surfactant Assemblies in Gas Phase : Bis(2-ethylhexyl)sulfosuccinate-Alkaline Metal Ion Aggregate; <u>Gianluca Giorgi</u> ¹ ; Vincenzo Turco Liveri ² ; ¹ <i>University of Siena, Siena, Italy; ²University of Palermo, Palermo, Italy</i>		

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TP 485 *Trondheim, Norway; ³University of Muenster, Muenster, Germany; ⁴Sequenom GmbH, Hamburg, Germany*
Noncovalent Interactions between Polyethyleneimine and Cibaaron Blue 3GA Studied by Mass Spectrometry; Ömür Celikbiçak^{1,2}; Bekir Salih²; Chrys Wesdemiotis¹; ¹*The University of Akron, Akron, OH;*
²*Hacettepe University, Ankara, Turkey*

TP 486 **Characterization of Binding Sites of Insulin and IGF-2 for a Genome-Inspired DNA Binding Ligand by MALDI-TOF-Mass Spectrometry;** Junfeng Xiao; Dmitri Zagorevskii; Linda McGown; *Rensselaer Polytechnic Institute, Troy, NY*

PEPTIDES: QUANTITATION – APPLICATIONS, 487 - 513

TP 487 **Novel Aspects of Quantitation of Immunogenic Gluten Peptides by LC/MS/MS;** Jennifer A. Voyksner¹; Robert D. Voyksner¹; Chaitan Khosla²; James Jorgenson³; ¹*LCMS Limited, Durham, NC;*
²*Stanford University, Stanford, CA;* ³*University of North Carolina at Chapel Hill, Chapel Hill, NC*

TP 488 **Quantification of Oxidative Modification in Hemoglobin Using iTRAQ/Isobaric Tags and Tandem Mass Spectrometry;** Tatiana Pimenova¹; Claudia P. Pereira²; Peter M. Gehrig³; Dominik J. Schaer²; Renato Zenobi¹; ¹*ETH Zurich, Zurich, Switzerland;* ²*University of Zurich, Zurich, Switzerland;*
³*Functional Genomics Center, Zurich, Switzerland*

TP 489 **High Sensitive Simultaneous Quantification Method of Hepcidin-20, 22, and -25 in Human Serum by LC/MS/MS;** Naoaki Murao; Hideyuki Yasuno; Yasushi Shimonaka; Masaki Ishigai; *Chugai Pharmaceutical Co., Ltd., Gotemba, Japan*

TP 490 **Stable Isotope Free Direct MALDI-MS Quantitation of Beta Defensin 2 Regulated by TLR Activation in Chicken Heterophils;** Lakshmi Kannan¹; Rohana Liyanage¹; Narayan C Rath²; Jackson O. Lay¹; ¹*University of Arkansas, Fayetteville, AR;* ²*PPPSRU, ARS, USDA, Fayetteville, AR*

TP 491 **Identification and Measurement of Pituitary Peptides during Development;** Adriana Bora; Lori Raetzman; Jonathan Sweedler; *University of Illinois, Urbana, IL*

TP 492 **Quantification of NMDA Receptor Binding Proteins in Normal and Schizophrenic Human Brain Tissue;** Eugene Ciccimaro¹; Mark Szewc¹; Mark Sanders¹; Chang-gyu Hahn²; Matthew L Macdonald²; ¹*Thermo Fisher Scientific, Somerset, NJ;* ²*University of Pennsylvania, Philadelphia, PA*

TP 493 **Quantitation of Exenatide in Human Plasma Using LC-MS/MS/MS (LC-MS³) on a Linear Q-Trap API-5500 System;** Yan Xu; John-Paul Gutierrez; Tian-sheng Lu; Haiqing Ding; Xiuying Chen; Kristin Miller; Yong-Xi Li; *Medpace Bioanalytical Laboratories, Cincinnati, OH*

TP 494 **Quantitation of Formaldehyde-Hemoglobin Adducts;** Maria Ospina; Adrienne K. Barry; Hubert Vesper; *Centers for Disease Control & Prevention, Atlanta, GA*

TP 495 **Measuring Acrylamide-Hemoglobin Adducts by LC/MS/MS;** Adrienne K. Barry; Maria Ospina; Hubert Vesper; *Centers for Disease Control Prevention, Atlanta, GA*

TP 496 **Increased α -Synuclein 3-Nitrotyrosine Levels at Tyrosine 39 in a Parkinson's Disease Model;** Steven R. Danielson; Jason Held; May Oo; Birgit Schilling; Bradford W. Gibson; Julie K. Andersen; *Buck Institute for Age Research, Novato, CA*

TP 497 **Quantitative Peptidomic Analysis of Peptide Amidation in Mouse Pituitary with Liquid**

TP 498 **Chromatography-Mass Spectrometry;** Ping Yin¹; Suresh P. Annangudi¹; Danielle Bousquet-Moore²; Eipper A. Betty²; Richard E. Mains²; Jonathan V. Sweedler¹; ¹*University of Illinois, Urbana, IL;* ²*University of Connecticut Health Center, Farmington, CT*

TP 499 **Mass Spectrometry-Based Quantification of Acrolein-Modified Thiol-Containing Peptides in an *in vivo* Model of Oxidative Stress;** Jianyong Wu; Claudia Maier; *Oregon State University, Corvallis, OR*

TP 500 **Development of the Plant Signaling Peptides Discovery Platform Using Mass Spectrometry;** Ying Lan Chen^{1,2}; Mei-chun Tseng³; Yet-ran Chen^{1,2}; ¹*Agricultural Biotechnology Research Center, Academ, Taipei, Taiwan;* ²*National Taiwan Ocean University, Keelung City, taiwan;* ³*Institute of Chemistry, Academia Sinica, Taipei, Taiwan*

TP 501 **A MRM-based Mass Spectrometry Method for Optimization of Protein Expression to Increase Biofuel Production in *E. coli*;** Christopher J. Petzold; Alyssa M. Redding; Tanveer S. Bathi; Farnaz F. Nowroozi; Aindrila Mukhopadhyay; *JBEI, Lawrence Berkeley National Laboratory, Emeryville, CA*

TP 502 **LC/MS/MS Analysis of Murine Fibrinopeptide A in Lung Tissue : a Candidate Biomarker for Pulmonary Fibrosis;** Joe Palandra; Theodore Baginski; Sharon Rouw; Josef Ozer; Dean J Welsch; *Pfizer, Chesterfield, MO*

TP 503 **The Quantification of Urocortin 2, a Large Synthetic Peptide, from Rat Plasma by UPLC/MS/MS;** Don Laudicina; Liping Jin; Ajay Madan; Haig Bozian; Kayvon Jalali; *Neurocrine Biosciences, San Diego, CA*

TP 504 **18O/16O Labeling for Tracking Therapeutic Protein Primary Structure Modifications;** Xue Li; Tung Chau; Qiang Qin; *Amgen Inc, Longmont, CO*

TP 505 **Evaluation of Novel Front-End Technologies to Facilitate the Study of BNP-32 by High Performance Mass Spectrometry;** Christopher M. Shuford¹; Genna L. Andrews¹; D. Keith Williams, Jr.¹; John C. Burnett, Jr.²; Adam M. Hawkrige¹; David C. Muddiman¹; ¹*N.C. State Univeristy, Raleigh, NC;* ²*Mayo Clinic College of Medicine, Rochester, MN*

TP 506 **Detection of Peanut, Milk, Egg and Wheat Allergens by LC-MS/MS: Towards a Multi-Allergen Assay for Major Allergens in Food;** Catherine S Lane¹; Phil J Jackson¹; Donna Potts¹; Jianru Stahl-zeng¹; Antonio Serna¹; Bert Popping²; Stephen J. Lock¹; *Applied Biosystems, Warrington, UK;* ²*Eurofins, Pocklington, UK*

TP 507 **Quantitative Analysis of N –and C-Terminal Phosphorylation of FRS-2 by Immuno-Enrichment and LC-MSMS – Method-Validation;** Stephan Bek; Francois Legay; Denis Herzog; *Novartis, Basel, Switzerland*

TP 508 **Comparing the Levels of Endogenous Peptides Using Isotopic Labels and Mass Spectrometry;** Fang Xie¹; Jonathan Sweedler²; ¹*University of Illinois at Urbana-Champaign, Urbana, IL;* ²*University of Illinois, Urbana, IL*

TP 509 **Quantitative Determination of Relative Concentrations of the Amyloid-Beta Peptide with Aspartic Acid in Different Isomeric Forms;** Igor Popov^{1,2}; Maria Indeykina³; Sergey Kozin^{2,3}; Alexey Kononikhin^{1,4}; Oleg Kharybin²; Alexander Makarov³; Alexander Archakov²; Eugene Nikolaev^{1,2}; ¹*Emanuel Institute of Biochemical Physics RAS, Moscow, Russia;*

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TP 509	<p>²Orekhovich Institute of Biomedical Chemistry RAMS, Moscow, Russia; ³Engelhardt Institute of Molecular Biology, Moscow, Russia; ⁴Institute for Energy Problems of Chemical Physics, Moscow, Russia</p> <p>The Grb2ome: Development of a Robust & Quantitative LC-On-Chip sMRM Assay for Proteins Associated with Human Grb2; <u>Lorne E. B. Taylor</u>¹; Nicolas Bisson¹; Andrew James¹; Brett Larsen¹; J. Bryce Young³; Nicole Hebert³; Stephen A Tate²; Tony Pawson¹; ¹Samuel Lunenfeld Research Institute, Toronto, Canada; ²MDS Sciex, Concord, ON; ³Eksigent Technologies, Dublin, CA</p>	TP 519	<p>F. Hunt²; Gerald W. Hart¹; ¹Johns Hopkins School of Medicine, Baltimore, MD; ²University of Virginia, Charlottesville, VA</p>
TP 510	<p>Quantitating the Cellular Response to DNA Double Strand Breaks through the MRN Complex; <u>Andrea M De Santis</u>; Philip Compton; Jeffrey Shabanowitz; Patrick Concannon; Donald F. Hunt; <i>University of Virginia, Charlottesville, VA</i></p>	TP 520	<p>Sialylation and Metastasis: A Biological Interplay; <u>Giuseppe Palmisano</u>; Rikke Leth-Larsen; Martin Rossel Larsen; <i>Southern University of Denmark, Odense, Denmark</i></p>
TP 511	<p>Quantification of Antigenic Components in Influenza Vaccines by Isotope Dilution Bottom Up Proteomics; <u>John R. Barr</u>; Tracie Williams; Jessica Norrgran; Carrie L Pierce; Adrian R Woolfitt; Maria I Solano; James Stevens; Reuben O Donis; James L Pirkle; <i>CDC, Atlanta, GA</i></p>	TP 521	<p>Glycoproteomic Analysis of Zebrafish Embryos by Novel Shotgun LC-MS/MS Approaches; <u>Chia-wei Lin</u>¹; Sz-wei Wu^{1,2}; Kay-hooi Khoo^{1,2}; ¹Institute of Biological Chemistry, Academia Sinica, Taipei, Taiwan; ²NRPGM Core facilities, Taipei, TAIWAN</p>
TP 512	<p>Quantitating Stress-Activated Changes of Gene Expression and Protein Abundance in <i>Saccharomyces cerevisiae</i>; <u>M. Violet Lee</u>; Scott E. Topper; Audrey P. Gasch; Joshua J. Coon; <i>University of Wisconsin-Madison, Madison, WI</i></p>	TP 522	<p>N-Linked Glycosylation Profiling and Comparisons of Five <i>Saccharomyces cerevisiae</i> Strains Using Label-Free and High Resolution Data Acquisition; <u>Michael R. Hoopmann</u>; Edward J. Hsieh; Michael J. MacCoss; <i>University of Washington, Seattle, WA</i></p>
TP 513	<p>Measurement of Protein Abundance in Mouse and Rat Organs; <u>Martha Stapels</u>¹; Jim Langridge¹; Chelsea Piper²; An Zhou²; ¹Waters Corporation, Milford, MA; ²Legacy Research, Portland, OR</p>	TP 523	<p>Mass Spectroscopic Characterization of Glycosylation in the Immune Adherence Receptor CD35; Thomas J. Allen¹; Haowei Song¹; Richard Hauhart¹; John P. Atkinson¹; John Turk¹; <u>Jan Crowley</u>²; ¹Washington University School of Medicine, St. Louis, MO; ²Washington University, St Louis, MO</p>
TP 514	<p>Defining IgA1 O-glycan Heterogeneity by Use of ECD and IgA1 Specific Proteases; Kazuo Takahashi; Stephanie B. Wall; Archer Smith IV; Hitoshi Suzuki; Stacy Hall; Jiri Mestecky; Bruce A. Julian; Jan Novak; <u>Matthew B. Renfrow</u>; <i>University of Alabama at Birmingham, Birmingham, AL</i></p>	TP 524	<p>Isolation and Glycosylation Profile of Prostate Specific Antigen (PSA) from Urine; <u>Lewis K. Pannell</u>; Sharon D Rose; Tapas Manna; Lalita A Shevde; <i>Mitchell Cancer Institute, Mobile, AL</i></p>
TP 515	<p>N-glycosylation Microheterogeneity and Site Occupancy of an Asn-X-Cys Sequon in Plasma-Derived and Recombinant Protein C; <u>Geun-cheol Gil</u>¹; Kevin Van Cott²; William H. Velander^{2,3}; ¹U. of Nebraska-Lincoln, Lincoln, NE; ²University of Nebraska, Lincoln, NE; ³Progenetics LLC, Blacksburg, VA</p>	TP 525	<p>Rapid Simultaneous Detection and Quantification of Allergenic Proteins Including Posttranslational Modification in Dietetic Food by Using Tandem LC/MS/MS; Marco Euler¹; <u>Jianru Stahl-Zeng</u>²; Marko Mank¹; Gilda Georgi¹; Bernd Stahl¹; ¹Danone Research Centre for Specialised Nutrition, Friedrichsdorf, Germany; ²Applied Biosystems, Darmstadt, Germany</p>
TP 516	<p>Proteolytic <i>Clostridium botulinum</i>: Combined mass Spectrometry and Microarray analyses of Diversity of Flagellar Glycosylation; <u>Susan Twine</u>¹; Luc Tessier¹; Michael Peck²; Catherine Paul^{1,3}; John Austin³; Susan Logan¹; Andrew Carter²; John F. Kelly⁴; ¹National Research Council, Ottawa, Canada; ²Institute of Food Research, Norwich, UK; ³Health Canada, Ottawa, ON; ⁴National Research Council of Canada, Ottawa, ON</p>	TP 526	<p>Proteomic Techniques for Micro-Determination of Tissue-Derived Proteoglycans, Bikunin and Decorin; Tatiana Laremore¹; Rick T. Owens²; Dmitri Zagorevski¹; Franklin E. Leach Iii³; Jon Amster³; Robert J. Linhardt¹; ¹Rensselaer Polytechnic Institute, Troy, NY; ²LifeCell Corporation, Branchburg, NJ; ³University of Georgia, Athens, GA</p>
TP 517	<p>Microbial Glycosylation: The Outer Surface of the Archaeon <i>Methanosaarcina mazei</i>; <u>Deborah R. Francoleon</u>¹; A. Jimmy Ytterberg¹; Pinmanee Boontheung¹; Unmi Kim¹; Patricia A. Denny²; Paul C. Denny²; Joseph A. Loo¹; Robert P. Gunsalus¹; Rachel R. Ogorzalek Loo¹; ¹University of California, Los Angeles, CA; ²University of Southern California, Los Angeles, CA</p>	TP 527	<p>Systematic Identification of Glyco-Alteration in a Glycoprotein Using Multiple Glycan Profiling Tools; <u>Hiromi Ito</u>¹; Atsushi Kuno¹; Hiromichi Sawaki¹; Maki Sogabe¹; Hidenori Ozaki¹; Yasuhito Tanaka²; Masashi Mizokami²; Jun-ichi Shoda³; Takashi Angata¹; Takashi Sato¹; Jun Hirabayashi¹; Yuzuru Ikehara¹; Hisashi Narimatsu¹; ¹RCMG, AIST, Tsukuba, Japan; ²Nagoya City University, Nagoya, Japan; ³University of Tsukuba, Tsukuba, Japan</p>
TP 518	<p>Identification and Quantitation of Phosphorylated and O-GlcNAcylated Proteins Associated with Mitotic Spindles and Midbodies during Cytokinesis (Part A); <u>Chad Slawson</u>¹; Zihao Wang¹; Namrata Udeshi²; Philip Compton²; Jeffrey Shabanowitz²; Donald</p>	TP 528	<p>Structural Study of Non-Enzymatic Glycation in Human Serum Albumin; <u>Zheling Zhang</u>¹; Malwina Huzarska¹; Jeremiah Tipton²; Mark R. Emmett³; Alan G. Marshall⁴; Nicolas Polfer¹; ¹University of Florida, Gainesville, FL; ²NHMFL, Tallahassee, FL; ³Nat'l High Magnetic Field Lab, Tallahassee, FL; ⁴Ion Cyclotron Resonance Prog, Tallahassee, FL</p>
			<p>Proteomic and Functional Characterisation of the Key Adipocytokine, Adiponectin; <u>Michelle Colgrave</u>¹; Ayanthi Richards²; Alun Jones³; Elaine Preston⁴; Donna Wilks⁴; Greg Cooney⁴; Jon P. Whitehead²; ¹CSIRO, St Lucia, Australia; ²Diamantina Institute, Brisbane, Australia; ³University of Queensland, Brisbane, Australia; ⁴Garvan Institute of Medical Research, Sydney, Australia</p>

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TP 529 **Characterization of Group 1 Grass Pollen Allergens using High Resolution / High Mass Accuracy Mass Spectrometry;** Francois Fenaille¹; Emmanuel Nony²; Henri Chabre²; Thierry Batard²; Philippe Moingeon²; Eric Ezan¹; ¹*CEA Saclay, DSV/iBiTec-S/SPI/LEMM, Gif Sur Yvette, France;* ²*Stallergenes SA, Antony, France*

TP 530 **Quantifying N-Glycosylation Distribution in Therapeutic Recombinant IgG Using MRM Strategies and Triple Quadrupole Linear Ion Trap MS Technology;** Jenny Albanese¹; Christie L Hunter²; Carmen Fernandez-Metzler³; ¹*Applied Biosystems, South Lake Tahoe, CA;* ²*Applied Biosystems, Foster City, CA;* ³*Merck and Co., West Point, PA*

TP 531 **Facile Isolation of Glycopeptides from Proteolytic Peptide Mixtures Using Custom-Made Cellulose-based Separation Cartridges;** Sergei Snovida; Ed Bodnar; Helene Perreault; *University of Manitoba, Winnipeg, Canada*

PROTEOMICS: SYSTEMS BIOLOGY, 532 - 558

TP 532 **A Target Discovery Platform for Identifying Breast Cancer-Associated MicroRNA Targets Utilizing Quantitative Proteomics;** Nicholas W. Bateman^{1,2}; Brian L Hood^{1,2}; Thomas P. Conrads^{1,2}; ¹*Department of Pharmacology & Chemical Biology, Pittsburgh, PA;* ²*Univ. of Pittsburgh Cancer Institute, Pittsburgh, PA*

TP 533 **Global Analysis of the Yeast Osmotic Stress Response Using High Resolution Mass Spectrometry Based Quantitative Proteomics;** Boumediene Soufi¹; Christian Dahl Kelstrup¹; Tobias C. Walther²; Florian Fröhlich²; Jesper V. Olsen¹; ¹*Department of Proteomics and Signal Transduction, Martinsried, Germany;* ²*Organelle Architecture and Dynamics, Martinsried, Germany*

TP 534 **Comparative Transcriptomic and Proteomic Profiling for Analysis of Cellular Responses to Oxidative Stress;** Michael W. Schmidt²; Shuangding Wu¹; Khatereh Motamedchaboki¹; Dieter A. Wolf¹; Laurence M. Brill¹; ¹*Burnham Instit for Med Res, La Jolla, CA;* ²*Tumitek LLC, Encinitas, CA*

TP 535 **Cataloguing the Drosophila Melanogaster Interactome by Parallel Affinity Purification and MS Analysis of Protein Complexes;** Johanna Rees¹; Irina Armean¹; Nick Lowe¹; Edward Ryder²; Daniel StJohnston¹; Kathryn S Lilley^{1,2}; ¹*University of Cambridge, Cambridge, UK;* ²*Sanger Center, Cambridge, UK*

TP 536 **Reducing Tissue Heterogeneity for the Specific Proteomic Analysis of Proximal Convoluted Tubule Apical Membranes;** Scott Walmley¹; Corey Broeckling^{1,2}; Jessica Prenni^{1,2}; Norman Curthoys¹; ¹*Colorado State University, Fort Collins, CO;* ²*Proteomics and Metabolomics Facility, Fort Collins, CO*

TP 537 **Proteomic Determination of the Proteins Interacting with PKC&alpha in the NGF/ATP Differentiation Process;** Consuelo Marin Vicente³; Marta Guerrero Valero¹; Michael Lund Nielsen²; Mikhail Savitski³; Juan Carmelo Gomez Fernandez¹; Roman Zubarev³; Senena Corbalan Garcia¹; ¹*University of Murcia, Murcia, Spain;* ²*Max-Planck-Institute for Bio, Martinsried, Germany;* ³*Uppsala University, Uppsala, Sweden*

TP 538 **A Systems-Approach to Studying Histone H4 and Its Epigenetic Regulatory Role in Human Embryonic Stem Cells;** Justin Brumbaugh¹; Doug Phanstiel¹; James A Thomson¹; Joshua J. Coon²; ¹*University of Wisconsin, Madison, WI;* ²*Univ of Wisconsin-Madison, Madison, WI*

TP 539 **Quantitative Proteomic Analysis of MyD88-Dependent Signal Regulation for Innate Immune Response;** Ying Du; Yanbao Yu; Qianchuan He; Xian Chen; *University of North Carolina, Chapel Hill, NC*

TP 540 **Dynamic Remodeling of CEBPα Protein Complexes in Myeloid Differentiation and Leukemogenesis;** Rositsa Koleva; Scott Ficarro; Manor Askenazi; Jignesh Parikh; Shaojuan Li; Jarrod Marto; *Dana Farber Cancer Instit, Boston, MA*

TP 541 **Shotgun Proteomic Analysis of a Model 7-member Human Gut Microbiota Created in Gnotobiotic Mice;** Alison L. Russell^{1,2}; Nathan C. Verberkmoes²; Nathan McNulty³; Manesh Shah²; Jeffrey Gordon³; Robert Hettich²; ¹*Genome Sciences & Technology, UT-Knoxville, Knoxville, TN;* ²*Oak Ridge National Laboratory, Oak Ridge, TN;* ³*Center for Genome Sciences, Washington University, St. Louis, MO*

TP 542 **Probing Changes in Biochemical Pathways in Environmentally Important Methanotrophs;** Konstantinos Thalassinos¹; Nisha Patel¹; Susan E. Slade¹; Vibhuti Patel¹; Andrew Crombie¹; J. Colin Murrell¹; Chris Hughes²; Joanne B. Connolly²; Jim Langridge³; James Scrivens¹; ¹*University of Warwick, Coventry, UK;* ²*Waters, Manchester, UK;* ³*Waters Corporation, Manchester, UK*

TP 543 **Translational Effect of MicroRNA-21 on Protein Expression Studied with Metabolically Labeled TGF-β 1 Transgenic Mice;** Jiheyeon Lim¹; Huimin Shang¹; Vikram Padmanabhan¹; Xiaohong Jing¹; Christine Esau²; Ruth Hogue Angeletti¹; Markus Bitzer¹; ¹*Albert Einstein College of Medicine, Bronx, NY;* ²*Regulus Therapeutics, Carlsbad, CA*

TP 544 **Altered Proteolytic Events in Experimental Autoimmune Encephalomyelitis Discovered by iTRAQ Shotgun Proteomics Analysis of Spinal Cord;** Mohit R Jain; Shengjie Bian; Tong Liu; Jun Hu; Stella Elkabes; Hong Li; *New Jersey Medical School Cancer Research Center, Newark, NJ*

TP 545 **Fed and Fasted Physiology Plays Significant Role in Shaping the Rat Liver Lipid Droplet Proteome;** Bindu Abraham²; Michael Sweredoski¹; Carole Szaltryd³; Sonja Hess¹; ¹*Caltech, Pasadena, CA;* ²*FDA, Bethesda, MD;* ³*University of Maryland, Baltimore, MD*

TP 546 **Systems Approach to Identify, Explore Components and Interactions of Presynapse Protein Network;** Rong Wang¹; Georgia Dolios²; Noura S. Abul-Husn²; Avi Ma'ayan²; Lakshmi A. Devi²; ¹*Mount Sinai School of Med, New York, NY;* ²*Mount Sinai School of Medicine, New York, NY*

TP 547 **Signaling Proteins are Less Abundant in Lipid Raft Proteomes of Tumorigenic Human Breast Cells;** Joseph Caruso; Paul Stemmer; *Wayne State University, Detroit, MI*

TP 548 **Proteomics Analysis Reveals Overexpression of the Tyrosine Kinase AXL as a Novel Mechanism of Lapatinib Resistance in Breast Tumor Cells;** Roland S. Annan; Therese Collingwood; Francesca Zappacosta; Dean McNulty; James Greger; Michael Huddleston; Anne-Marie Martin; Hong Shi; Yuan Liu; Joel Greshock; Ganesh Sathe; Li Liu; Tona Gilmer; *GlaxoSmithKline, King of Prussia, PA*

TP 549 **Knock Down, Drag Out Proteomics for Biomarker Validation;** Devanand M. Pinto¹; Stephen A Tate²; Christie L Hunter³; Kenneth Chisholm¹; ¹*NRC, Halifax, Canada*

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TP 550	<i>Canada; ²MDS Analytical Technologies, Concord, ON; ³Applied Biosystems, Foster City, CA</i> Proteomic Identification of Novel Protein Targets and Downstream Effects of MicroRNA-155 in B Cell Lymphoma; <u>Shi-jian Ding</u> ; Yulei Shen; Miao Liu; Steven Hinrichs; John Chan; <i>Univ of Nebraska Med Center, Omaha, NE</i>	TP 561	Mass Defect Trigger IDA to Improve Selection of Candidate Ions for MSMS Confirmation of Metabolites From <i>in-vivo</i> Samples; <u>J.c. Yves Leblanc¹; Eva Duchoslay¹; Nic Bloomfield²; ¹MDS Analytical Technologies, Concord, On, Canada; ²MDS Analytical Tech- Sciex, Concord, ON</u>
TP 551	Systems Biology Analyses of Leukemia Stem Cells to Identify Novel Regulators of Self-Renewal; <u>Matthias Trost¹; Olivier Herault^{1,2}; Martin Sauvageau^{1,3}; Amelie Faubert^{1,3}; Nadine Mayotte¹; Guy Sauvageau^{1,4}; Pierre Thibault^{1,5}; ¹Institute for Research in Immunology and Cancer, Montréal, Canada; ²INSERM ESPRI-EA3855, Tours, France; ³Dept. of Molecular Biology, Université de Montréal, Montréal, Canada; ⁴Dept. of Medicine, Université de Montréal, Montréal, Canada; ⁵Dept. of Chemistry, Université de Montréal, Montréal, Canada</u>	TP 562	Integrated Approach to API Quantitation and Rapid <i>in vivo</i> Metabolic Profiling in Early Discovery PK Assays; <u>Asoka Ranasinghe; Bogdan Slezcka; Celia Darienzo; Ragu Ramanathan; William Humphreys; Timothy Olah; Bristol-Myers Squibb Company, Princeton, NJ</u>
TP 552	Application of Label-Free Quantitative LC-MS-Based Proteomics for Biomarker Identification in <i>Salmonella Typhimurium</i>; <u>Charles Ansong¹; Hyunjin Yoon²; Marina A. Gritsenko¹; Heather M. Mottaz-Brewer¹; Joshua N. Adkins¹; Fred Heffron²; Richard D. Smith¹; ¹Pacific NW National Lab, Richland, WA; ²Oregon Health and Science University, Portland, OR</u>	TP 563	Intelligent Workflows (MS^M) for Metabolite Screening and Characterization Using an LTQ Orbitrap; <u>Yingying Huang¹; Ji Ma²; Jae C. Schwartz¹; Robert Cho²; Yan Chen¹; Tim Carlson²; ¹Thermo Fisher Scientific, San Jose, CA; ²Amgen Inc., South San Francisco, CA</u>
TP 553	Determination of Cytokine Signaling-Dependent Protein Stability by Pulse-Chase SILAC Experiments; <u>Joseph Anthony; Shujun Lin; Vincent Duronio; <u>Juergen Kast</u>; University of British Columbia, Vancouver, Canada</u>	TP 564	Application of Statistical Uncertainty Derived from Experimental <i>in situ</i> Mass Spectrometer Performance Can Differentiate between Probable and Improbable Candidate Formulae; <u>Kirsten Hobby¹; Richard T. Gallagher²; ¹Kisotopic Solutions, Manchester, UK; ²AstraZeneca, Macclesfield, UK</u>
TP 554	Effects of Strain Type and Growth Conditions on the Secretome of <i>Tetrahymena thermophila</i>; <u>Casey Madingen¹; Kathleen Collins²; Christopher Taron¹; Jack Benner¹; ¹New England BioLabs, Ipswich, MA; ²University of California, Berkeley, Berkeley, CA</u>	TP 565	Small Molecule Characterization from Molecular Formula Determination to Automated Structure Verification; <u>Herbert Thiele¹; Sebastian Goetz¹; Aiko Barsch¹; Ulrich Braumann²; Manfred Spraul²; ¹bruker Daltonik GmbH, Bremen, Germany; ²Bruker Biospin, Rheinstetten, Germany</u>
TP 555	Proteomic Analysis of <i>Trypanosoma cruzi</i> Intracellular Amastigotes; <u>Xiang Zhu; James A Atwood III; Brent Weatherly; Todd A Minning; Rick L. Tarleton; Ron Orlando; <i>Univ. of Georgia, Athens, GA</i></u>	TP 566	Novel Metabolite Search Using Stable Isotope Labeled Docosahexaenoic Acid Coupled to HPLC/MS/MS; <u>Jeongrim Lee; Karl Kevala; Hee-yong Kim; National Institutes of Health, Bethesda, MD</u>
TP 556	Quantitative Proteomics Analysis of Ionizing Radiation-Induced Dose-dependent Dynamics of ATM-Associated Complexes; <u>Yuan Yu Lee¹; Yanbao Yu³; Nedyalka Dicheva²; Xian Chen^{1,2}; ¹University of North Carolina, Chapel Hill, NC; ²UNC-Duke Proteomics Center, Chapel Hill, NC; ³Institute of Biomedical Studies, Fudan University, Shanghai, China</u>	TP 567	In vivo Metabolic Profiling of Carbamezapine in Brain and CSF Using an Advanced Hybrid Quadrupole-Ion Trap System and Fast Chromatography; <u>Ru Qiu (Sophie) Pan²; Hesham Ghobarah¹; Tanya Gamble¹; Henrianna Y. Pang²; Yingbo Yang²; Julia Izhakova²; Douglas J. Turk²; ¹Applied Biosystems / MDS Analytical Technologies, Concord, Canada; ²NoAb BioDiscoveries Inc., Mississauga, Canada</u>
TP 557	Leaf Development and Cellular Differentiation of the Maize Leaf Organ Defined by Large Scale Quantitative Proteomics and Cluster Analysis; <u>Klaas J. Van Wijk; Giulia Friso; Wojciech Majeran; Cornell University, Ithaca, NY</u>	TP 568	Intelligent Data Acquisition and Metabolite Detection in Complex Matrices Using an Automated Mass Exclusion Calculator; <u>Tim J Stratton¹; Shichang Miao¹; Yingying Huang²; Thomas D McClure²; ¹ChemoCentryx, Mountain View, CA; ²ThermoFisher Scientific, San Jose, CA</u>
TP 558	Quantitative Global Proteome and Phosphoproteome Profiling of Plant Immune Signaling Triggered by Pathogen Effector; <u>Zhouxin Shen; Chris C.N. van Schie; Amanda G. Mason; Steven P. Briggs; <i>University of California, San Diego, La Jolla, CA</i></u>	TP 569	Identification of Metabolites by Microbore Liquid Chromatography and Accurate Mass Triggered Data-Dependent Mass Analysis Using an LTQ/Orbitrap; <u>Heng-Keang Lim; Jose Silva; Johnson and Johnson PRD, Raritan, NJ</u>
NOVEL METABOLITE IDENTIFICATION TECHNIQUES, 559 - 585		TP 570	Development of a Metabolite Identification Workflow Using MALDI-QTof and Multivariate Statistical Analysis; <u>Stephen McDonald²; Andrew Baker²; Henry Y. Shion¹; ¹Waters Corp., Milford, MA; ²Waters Corporation, Beverly, MA</u>
TP 559	Metabolomics: From Solution to Surfaces; <u>Gary Siuzdak; Oscar Yanes; Hin-koon Woo; Trent Northen; Sunia Trauger; Paul H Benton; Gary J Patti; William Wikoff; <i>The Scripps Research Institute, La Jolla, CA</i></u>	TP 571	Application of Multivariate Analysis for Determining Metabolic Profiles of Drugs: A Case Study Using Nefazodone; <u>Richard Schneider; Hui Zhang; Lillian Mu; Amit Kalgutkar; Pfizer Inc., Groton, CT</u>
TP 560	The Creation and Application of Theoretical Mass Spectra for Radio-Labelled Pharmaceutical Compounds; <u>Richard T. Gallagher²; Tim Smith²; Kirsten Hobby¹; ¹Kisotopic Solutions, Manchester, UK; ²AstraZeneca, Macclesfield, UK</u>	TP 572	Metabolite Profiling of Acetaminophen in Human Saliva Using UPLC-MS and MetaboLynx&trade; <u>Jordan Richardson¹; Dr David Douce²; Dr Catherine</u>

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TP 573	Duckett ¹ ; ¹ <i>Keele University, Stoke-on-trent, UK; ²Waters Corporation, Manchester, UK</i> A Study of Tetrapyrroles Compounds, i.e. Bile Pigment Metabolites, Using ESI-MS/MS Method; <u>Nhu Quynh, Thi Nguyen</u> ; Nhu Quynh, Thi Nguyen; <i>Chemistry Department, SUNY B, Buffalo, NY</i>	TP 584	Peijuan Penny Zhu; <u>Wei Tong</u> ; Kevin Alton; Swapan K. Chowdhury; <i>Schering-Plough Research Institute, Kenilworth, NJ</i> Determination of Ibuprofen Drug Metabolites in Urine by the Use of Multivariate Analysis; <u>Masahiro Maeda</u> ; Yoshifumi Kogure; Yoshiyuki Ishii; <i>Agilent Technologies, Tokyo, Japan</i>
TP 574	Fast and Sensitive Metabolite Identification of Amiodarone in Human Bile with UPLC Coupled with a Benchtop oaTOF MS; <u>Xiaoyan Chen</u> ¹ ; Kate Yu ² ; Jose Castro-perez ² ; Dafang Zhong ¹ ; Ke Li ¹ ; John P. Shockcor ² ; Tiangen You ³ ; ¹ <i>Shanghai Institute of Materia Medica, Shanghai, China; ²Waters Corporation, Milford, MA; ³Shanghai Eastern Hospital, Shanghai, China</i>	TP 585	A Rapid Metabolite Identification and Reaction Phenotyping Strategy to Reduce Drug Interaction Potentials at Early Drug Discovery Stage; <u>Shihong Wang</u> ; Weiping Jia; Elaine Ginn; Song Lin; <i>Novartis Institute for Biomedical Research, Emeryville, CA</i>
TP 575	A Rapid Automated Approach to Estimate Metabolite Exposure in Pooled Human Plasma Using a Combination of Tecan and LC-MS; <u>Nirmala Raghavan</u> ; Ming Yao; S. Nilgun Comezoglu; William G Humphreys; Ragu Ramanathan; <i>Bristol-Myers Squibb, Princeton, NJ</i>	TP 586	ENVIRONMENTAL, 586 - 608 Improved LC/MS/MS Methods for the Analysis of Perfluorinated Compounds (PFCs) in Whole Fish and Fish Livers; <u>Amy Delinsky</u> ¹ ; Andrew B. Lindstrom ¹ ; Mark J. Strynar ¹ ; Jerry L. Varns ² ; Shoji F. Nakayama ³ ; ¹ <i>U.S. EPA, RTP, NC; ²NCBA Inc, SEE Program, Durham, NC; ³ORISE, Oak Ridge, TN</i>
TP 576	Investigation of Isotope Patterns of Pharmaceutical Molecules by Two Independent Detectors in a LTQ/Orbitrap Instrument; <u>Lin Deng</u> ¹ ; Jianyao Wang ² ; Ming Gu ³ ; ¹ <i>Wyeth, Collegeville, PA; ²Wyeth Pharmaceuticals, Collegeville, PA; ³Cerno Bioscience, Yardley, PA</i>	TP 587	A Novel Tool for Exposure Source Identification of Perfluoroalkyl Substances Using Enantiospecific HPLC-MS/MS; <u>Yuan Wang</u> ¹ ; Jonathan W. Martin ² ; ¹ <i>University of Alberta, Edmonton, Canada; ²University of Alberta, Edmonton, Canada</i>
TP 577	Increasing the Hit-Rate in the Automated Structural Elucidation of Product Ions and Drug Metabolites Using an Exhaustive Bond Disconnection Approach; <u>Laurent Leclercq</u> ¹ ; Michael Hartshorn ² ; Alastair Hill ² ; Russel Mortishire-Smith ¹ ; Filip Cuyckens ¹ ; Jose Castro-Perez ³ ; ¹ <i>Johnson & Johnson Pharmaceutical Research and Development, Beerse, BELGIUM; ²Dotmatics, Bishops Stortford, UK; ³Waters Corp., Milford, MA</i>	TP 588	Pitfalls and Prospects: Analysis of Perfluorinated Compounds (PFCs) Utilizing LC/MS/MS; <u>Alexander Ruderisch</u> ¹ ; Christian Dausch ¹ ; Juergen Wendt ² ; Stefan Fenzel ² ; ¹ <i>Agrolab Labor GmbH, Bruckberg, Germany; ²Agilent Technologies, Waldbronn, Germany</i>
TP 578	High-Throughput and Sensitive Analysis of Phosphorylated Metabolic Intermediates Using MALDI Mass Spectrometry; <u>Daichi Yukihira</u> ; Daisuke Miura; Hiroyuki Wariishi; <i>Kyushu University, Fukuoka, Japan</i>	TP 589	Perfluorinated Compounds in Standard Reference Materials; <u>Jessica L. Reiner</u> ; Jennifer M. Keller; John R. Kucklick; Steven G. O'Connell; Michele M. Schantz; <i>NIST, Charleston, SC</i>
TP 579	Development of High-Throughput Metabolic Profiling Method Using Highly Sensitive MALDI Mass Spectrometry; <u>Daisuke Miura</u> ¹ ; Yoshinori Fujimura ¹ ; Shinichi Yamaguchi ² ; Hirofumi Tachibana ¹ ; Hiroyuki Wariishi ¹ ; ¹ <i>Kyushu University, Fukuoka, Japan; ²Shimadzu Corporation, Kyoto, Japan</i>	TP 590	Study on the Oxidative Degradation Reaction of Sertraline Catalyzed by Fe-TAML/Hydrogen Peroxide System Using Liquid Chromatography/Tandem Mass Spectrometry; <u>Longzhu Shen</u> ; Mark E. Bier; Terrence J. Collins; <i>Carnegie Mellon University, Pittsburgh, PA</i>
TP 580	Rapid Identification of Drug Metabolites using a Fast Hybrid Triple Quadrupole Linear Ion Trap Mass Spectrometry; <u>Daniel Lebre</u> ; Julie Wingate; Gary Impey; <i>Applied Biosystems/MDS Analytical Technologies, Concord, Canada</i>	TP 591	Ozonation of Ethinyl Estradiol (a Synthetic Steroidal Estrogen) in Aqueous-Methanolic Solution: Monitoring by Direct Infusion Electrospray Ionization Mass Spectrometry; <u>Rodinei Augusti</u> ; Clésia C. Nascentes; Karla M. Vieira; <i>Federal University of Minas Gerais, Belo Horizonte/ MG, Brazil</i>
TP 581	In vivo Metabolic Profiling of Carbamazepine at Physiologically Relevant Concentrations Using Hybrid Quadrupole-Linear Ion Trap Technology; Tanya Gamble ¹ ; Henrianna Y. Pang ² ; Sophie Pan ² ; Yingbo Yang ² ; William Cui ² ; Douglas J. Turk ² ; <u>Hesham Ghobarah</u> ¹ ; ¹ <i>Applied Biosystems/MDS Analytical Technologies, Concord, Canada; ²NoAb BioDiscoveries Inc., Mississauga, Canada</i>	TP 592	LC-MS Analysis of Spectrophotometric Chemical Indicator Impurities: Toward Understanding the Impact of Impurities in All Spectrophotometric Analytical Techniques; <u>Brian P. Gregson</u> ; Xuewu Liu; David Fries; <i>University of South Florida College of Marine Sciences, St. Petersburg, FL</i>
TP 582	Evaluation of U-HPLC for Multiple Data Dependent Scan Experiments using LTQ-OrbiTrap for Rapid Metabolite Identification and Quantitation; <u>C. Emily Luk</u> ; Petia Shipkova; Jonathan L. Josephs; <i>Bristol-Myers Squibb Co., Hopewell, NJ</i>	TP 593	Identification of New Photolytic and Photocatalytic Transformation Products of Antibiotic Trimethoprim in Aqueous Solutions by Combination NanoESI-QqTOF-MS-MS and LC-MS-MS; <u>Despina Tsipis</u> ¹ ; Helen V. Botitsi ¹ ; Sotirios N. Katsikis ³ ; Anastasios Economou ³ ; Spiros D. Garbis ² ; ¹ <i>General Chemical State Laboratory, Athens, Greece; ²B.R.F.A.A., Athens, Greece; ³University of Athens, Athens, Greece</i>
TP 583	An Accurate-Mass-Based Isotope-Pattern-Filtering Algorithm for Extraction of Drug Metabolites Containing a Fixed Ratio of Isotopes in LC/MS Data;	TP 594	Determination of Six Antibiotics in Surface Water by On-Line SPE(Solid-Phase Extraction)-Liquid Chromatography Tandem Mass Spectrometry; Keunjoo Choi ¹ ; Soo-jeon Yoo ¹ ; Jae-soon Roh ¹ ; <u>Seung-Hyun Kim</u> ² ; ¹ <i>waterworks institute, Kimhae, South Korea; ²Civil</i>

TUESDAY POSTERS

TP 595	Engineering Department, Kyungnam University, Masan, South Korea	TP 606	Ion Chromatography and MS/MS Quantification of Polyphosphonates and Scale Inhibitors in High Ionic Strength Samples; <u>Stacy Henday</u> ¹ ; Jinyuan Wang ¹ ; Charles T. Yang ² ; William C. Schnute ¹ ; ¹ Dionex Corporation, Sunnyvale, CA; ² Thermo Fisher Scientific, San Jose, CA
TP 596	Fully Automated Quantification of Different Classes of Cyanobacterial Toxins by Online SPE-LC-ESI-MS/MS; <u>Liza Viglino</u> ¹ ; Pascal Lemoine ¹ ; Michèle Prévost ² ; Sébastien Sauvé ³ ; ¹ University, Montreal, Canada; ² Polytechnique de Montréal, Montréal, Canada; ³ Université de Montréal, Montréal, QC	TP 607	Food and Environmental Contaminates: Toxic Metals in Food; Marc E. Engel; FDACS, Tallahassee, FL
TP 597	LDTD-APCI-MS/MS: Optimization and Method Application for Selected Endocrine Disrupting Compounds in Water Matrices; <u>Paul B. Fayad</u> ¹ ; Michèle Prévost ² ; Sébastien Sauvé ¹ ; ¹ Université de Montréal, Montréal, Quebec, Canada; ² École Polytechnique de Montréal, Montréal, Quebec, Canada	TP 608	Identification of New Arsenic Species in Construction and Demolition Debris Landfill Leachate and Groundwater using Off-Line IC ICP-MS; <u>Jianye Zhang</u> ¹ ; Yong Cai ² ; Timothy Townsend ¹ ; ¹ University of Florida, Gainesville, FL; ² Florida International University, Miami, FL
TP 598	High Throughput Analysis of Some Endocrine Disrupting Compounds (EDCs) in Solid Matrices by LTDI-MS/MS; <u>Liza Viglino</u> ¹ ; Paul Fayad ² ; Michèle Prévost ³ ; Sébastien Sauvé ⁴ ; ¹ University, Montreal, Canada; ² Université de Montréal, Montréal, QC; ³ École Polytechnique de Montréal, Montréal, Canada; ⁴ Université de Montréal, Montréal, QC	PROTEOMICS: CLINICAL APPLICATIONS, 609 - 628	
TP 599	Analysis of Hydroxylated Polybrominated Diphenyl Ether Metabolites Using Atmospheric Pressure Chemical Ionization Liquid Chromatography Mass Spectrometry (APCI LC/MS); <u>Sara J. Lupton</u> ¹ ; Troy Wood ² ; Diana Aga ² ; ¹ State University of New York, Buffalo, NY; ² University at Buffalo, Buffalo, NY	TP 609	Identification of Novel Tumor Marker in Human Oral Cancer by Mass Spectrometry-Based Proteomics; <u>Tsung-ching Lai</u> ; Yi-Hua Jan; Chung-Hsuan Chen; Michael Hsiao; <i>The Genomics Research Center, Academia Sinica, Taipei, Taiwan</i>
TP 600	A Comparison of Direct Injection and On-Line Solid Phase Extraction for the Detection of Acidic Herbicides in Water; Stephen J. Lock ¹ ; Pamela Stoddart ¹ ; <u>Iain Gibb</u> ¹ ; James Thomas ² ; ¹ Applied Biosystems, Warrington, UK; ² SEPA, Glasgow, UK	TP 610	Altered Glycosylation Pattern of Total Serum IgG in Patients with Rheumatoid Arthritis Analyzed by MALDI-TOF MS; <u>Ray Sanchez</u> ¹ ; Katrin Sparbier ² ; Hassan Dihazi ³ ; Sabine Blaschke ³ ; Gerhard-Anton Mueller ³ ; Thomas Flad ⁴ ; Markus Kostrzewa ² ; Arndt Asperger ² ; ¹ Bruker Daltonics Inc., Billerica, MA; ² Bruker Daltonik GmbH, Bremen, Germany; ³ University of Göttingen, Göttingen, Germany; ⁴ PANATecs, Tübingen, Germany
TP 601	LC/MS/MS Analysis of Imidazolinone Herbicides in Sprinkler Irrigation Leachate; John Headley; <u>Kerry M. Peru</u> ; Jonathan Bailey; Allan Cessna; <i>Environment Canada, Saskatoon, Canada</i>	TP 611	Wnt Signaling Related Biomarker Discovery and Targeted Detection in Colon Cancer; <u>Yi Chen</u> ; Mike Gruidl; Richard Z. Liu; Ann Chen; Steven Eschrich; Timothy Yeatman; John Koomen; <i>H. Lee Moffitt Cancer Center, Tampa, FL</i>
TP 602	Use of Accurate Mass Screening to Detect Drugs of Abuse in Sacramento River; William T. Jewell; <i>UC Davis, Davis, CA</i>	TP 612	Mass Spectrometry Based Analysis and Identification of Candidate Biomarkers in Liver Cancer; <u>Yi-hua Jan</u> ; Tsung-ching Lai; Po-sheng Huang; Michael Hsiao; <i>Genomic Research Center, Academia Sinica, Taipei, Taiwan</i>
TP 603	Improved Method for the Determination of Organochlorine, Organophosphate and Pyrethroid Pesticides in House Dust Using Solid Phase Extraction and GC/EI-MS/MS; <u>Cariton Kubwabo</u> ; Brian Stewart; Geneviève Grenier; Pat Rasmussen; <i>Health Canada, Ottawa, On, Canada</i>	TP 613	Characterization of Secreted Proteins during the Differentiation of Human Preadipocytes to Adipocytes; <u>Jun Zhong</u> ¹ ; Sarah Krawczyk ² ; Raghobhama Chaerkady ^{1,3} ; G. William Wong ¹ ; Barbara E. Corkey ² ; Akhilesh Pandey ¹ ; ¹ Johns Hopkins University, Baltimore, MD; ² Boston University, Boston, MA; ³ Institute of Bioinformatics, Bangalore, India
TP 604	Assessment of Occurrence and Removal of Pesticides and Their Degradation Byproducts in Missouri Natural and Treated Drinking Water by LC-MS/MS; Yinfu Ma ¹ ; <u>Xiaoliang Cheng</u> ¹ ; Honglan Shi ² ; Craig Adams ³ ; Terry Timmons ⁴ ; ¹ Missouri S&T, Rolla, MO; ² Missouri S&T/ERC, Rolla, MO; ³ University of Kansas, Lawrence, KS; ⁴ Missouri Department of Natural Resources, Jefferson City, MO	TP 614	Direct Orthotopic Human Glioma Models: Protein Analysis Using MALDI-IMS; <u>Sara L. Frappier</u> ¹ ; Anuraag Sarangi ¹ ; Michael K. Cooper ¹ ; Richard M. Caprioli ² ; ¹ Vanderbilt University, Nashville, TN; ² Vanderbilt Univ Sch of Med, Nashville, TN
TP 605	Comparison of Semivolatile Disinfection By-Products Formation in Water Treatment Process with Classic and Perspective Disinfecting Agents; <u>Olga Polyakova</u> ; Maria Khrushcheva; Albert Lebedev; <i>Moscow State University, Moscow, Russian Federation</i>	TP 615	Characterization of Transferrin Isoforms in Cerebrospinal Fluid Using Accurate Mass and MSⁿ; <u>Kristy J. Brown</u> ¹ ; Yetrib Hathout ¹ ; Fanny Mochel ^{2,3} ; Raphael Schiffmann ³ ; Adeline Vanderver ¹ ; ¹ Children's National Medical Center, Washington, DC; ² Hospital de la Salpêtrière, Paris, France; ³ Baylor Research Institute, Dallas, TX
TP 616	Long Term, On-line Monitoring of Disinfection Byproducts in a Public Swimming Pool Using an Un-Supervised MIMS; Gert H. Kristensen ¹ ; Morten M. Klausen ¹ ; Vagn A. Hansen ³ ; <u>Frants R. Lauritsen</u> ² ; ¹ DHI - Water - Environment - Health, Copenhagen, Denmark; ² Chemistry, Copenhagen University, Copenhagen, Denmark; ³ Mikrolab Aarhus A/S, Aarhus, Denmark	TP 617	Identificaton of Biomarkers in Patients with Aspergillosis; <u>Josée Chabot</u> ; Donald C. Sheppard; Momar Ndao; Brian J. Ward; Christine Straccini; Bernard F. Gibbs; <i>McGill University, Montreal, Canada</i>
			Proteomic Analysis of Innate Defenses in the Small Intestine: Correlation with Disease Pathophysiology; <u>Dipankar Ghosh</u> ¹ ; S. K. Venugopal ¹ ; Sunil Kumar ²

TUESDAY POSTERS

		Uday Ghoshal ² ; ¹ <i>Jawaharlal Nehru University, New Delhi, India; ²Sanjay Gandhi PG Institute of Medical Sciences, Lucknow, India</i>	Cambridge, MA; ⁴ <i>National Taiwan University Hospital, Taipei, Taiwan</i>
TP 618		A Label-Free Proteomic Analysis of Low Abundance Multiple Myeloma Clinical Samples; <u>Rick Edmondson</u> ; Sheeno Thypambil; Veronica Macleod; Bart Barlogie; John D. Shaughnessy, Jr; <i>Univ Arkansas Med Sci., Little Rock, AR</i>	IONIZATION MECHANISMS, 629 - 647
TP 619		Unique Insights into Disease Progression Using Quantitative Bottom-Up Proteomics: A Phenotypic Characterization of Chlamydia Infection Using Gel-Free Label-Free LC/MS/MS; J. Will Thompson; Alex Saka; Laura G. Duboise; <u>Arthur Moseley</u> ; Raphael Valdivia; <i>Duke Univ. School of Medicine, Durham, NC</i>	Insights into the Mechanism of Protein Oxidation during Electrospray Ionization; <u>Brian Boys</u> ; Jamie Noel; Lars Konermann; <i>Univ. of Western Ontario, London, ON</i>
TP 620		Quantitative Proteome Analysis of CSF Samples Using a Label-Free Proteomics Technology; <u>Barbara Sitek</u> ¹ ; Sebastian Link ¹ ; Birgit Korte ¹ ; Christian Stephan ¹ ; Wolfgang Jabs ² ; Daniel C. Chamrad ³ ; Klaus Marquart ³ ; Martin Blueggel ³ ; Carsten Baessmann ² ; Beate Gleissner ⁴ ; Helmut E. Meyer ⁵ ; Kai Stühler ¹ ; ¹ <i>Ruhr-University Bochum, Dortmund, Germany; ²Bruker Daltonik GmbH, Bremen, GERMANY; ³Protagen AG, Dortmund, Germany; ⁴Universitätsklinikum des Saarlandes, Homburg, Germany; ⁵Ruhr University of Bochum, Bochum, Germany</i>	Proton Distribution in ESI Nanodroplets: Is the "Surface Charge Concept" Really Tenable? <u>Elias Ahadi</u> ¹ ; Lars Konermann ² ; ¹ <i>The University of Western Ontario, London, ON, Canada; ²Univ. of Western Ontario, London, ON</i>
TP 621		Revealing the Mystery Behind 'The Elephant Man': Proteomic Characterization of Proteus Syndrome; <u>Shama P. Mirza</u> ; Kelly Duffy; Marla A. Chesnik; Regina Cole; David P. Bick; Michael Olivier; <i>Medical College of Wisconsin, Milwaukee, WI</i>	Origin of the Proton Required for the Formation of Gaseous [M+H]⁺ Ions from Aprotic Solvents; <u>Changching Chan</u> ¹ ; Mark S. Bolgar ² ; Athula B. Attygalle ³ ; ¹ <i>Stevens Institute of Technology, Hoboken, NJ; ²Bristol-Myers Squibb, New Brunswick, NJ; ³Stevens Institute of Technology, Hoboken, NJ</i>
TP 622		An Extensive Peptide Identification List of MALDI MS Profile Peaks from the Analysis of Human Blood Serum; <u>Ali Tiss</u> ¹ ; Celia Smith ¹ ; Usha Menon ² ; Ian Jacobs ² ; John Timms ² ; Rainer Cramer ¹ ; ¹ <i>University of Reading, Reading, UK; ²UCL, London, UK</i>	Probing Temperature Changes in the Electrospray Plume Using Laser-Induced Fluorescence Spectroscopy; <u>Stephen C. Gibson</u> ¹ ; Yu Zhu ² ; Charles S. Feigerle ¹ ; Kelsey D. Cook ¹ ; ¹ <i>University of Tennessee, Knoxville, TN; ²SABIC Innovative Plastics, Washington, WV</i>
TP 623		Identification and Quantification of N-Linked Glycoproteins in Human Cerebrospinal Fluid Unique to Parkinson's Disease or Its Progression; <u>Hyejin Hwang</u> ¹ ; Kathy Chung ² ; Joseph Quinn ² ; Elaine Peskind ¹ ; Jing Zhang ¹ ; ¹ <i>University of Washington, Seattle, WA; ²Oregon Health and Science University, Portland, OR</i>	Spatial Mapping of Analyte Ion Intensity of Nanoelectrospray in the Plume-Inlet Region; <u>Gary Valaskovic</u> ¹ ; Mike S. Lee ² ; ¹ <i>New Objective, Inc., Woburn, MA; ²Milestone Development Services, Newtown, PA</i>
TP 624		Identification and Quantification of N-Linked Glycoproteins in Human Cerebrospinal Fluid Unique to Parkinson's Disease or Its Progression; <u>Hyejin Hwang</u> ¹ ; Kathy Chung ² ; Joseph Quinn ² ; Elaine Peskind ¹ ; Jing Zhang ¹ ; ¹ <i>University of Washington, Seattle, WA; ²Oregon Health and Science University, Portland, OR</i>	Corona Discharge Initiated Electrochemical Ionization; <u>John R Lloyd</u> ² ; Sonja Hess ¹ ; ¹ <i>Caltech, Pasadena, CA; ²NIDDK, Germantown, MD</i>
TP 625		Identification of Biomarkers in Urine and Cell Lines Relating to Bladder Carcinoma; <u>Wassim Kassouf</u> ; Jordan R Steinberg; David W. Blank; Bernard F. Gibbs; <i>McGill University, Montreal, Canada</i>	Mass Spectrometry of Monolayer Protected Clusters; <u>Christina A. Fields-Zinna</u> ; Royce W. Murray; <i>UNC-Chapel Hill Chemistry Dept., Chapel Hill, NC</i>
TP 626		Tandem Mass Spectrometry Reveals Novel Insulin Stimulated IRS-1 Interacting Partners; <u>Zhengping Yi</u> ; Moulin Luo; Rebekka Mapes; Natalie Lefort; Paul Langlais; Benjamin Bowen; Lawrence J. Mandarino; <i>Arizona state university, Tempe, AZ</i>	The Effects of Matrix, Electrospray Solution, and Laser on Desorption and Ionization Mechanisms in Electrospray-Assisted Laser Desorption Ionization Mass Spectrometry; <u>Chu-Nian Cheng</u> ; Min-Zong Huang; Jentae Shiea; <i>National Sun Yat-Sen Univ., Kaohsiung, Taiwan</i>
TP 627		Quantitative Mass Spectrometry Reveals Targets of the Cytotoxic Response to DNA Damage; <u>Aaron Aslanian</u> ¹ ; John Yates ² ; Tony Hunter ¹ ; ¹ <i>Salk Institute, La Jolla, CA; ²The Scripps Research Institute, La Jolla, CA</i>	Mechanisms Involved in Positive Atmospheric Pressure Chemical Ionization (APCI) of an LTD Source; <u>Pierre Picard</u> ¹ ; E. Real Paquin ² ; Patrice Tremblay ³ ; ¹ <i>Phytronix Technologies, Inc., Quebec, Canada; ²Université Laval, Québec, QC; ³Phytronix Technologies, Quebec, QC</i>
TP 628		Identification of Subtype-specific Glycoproteins in Triple-Negative Breast Cancer; <u>Li-Hui Tseng</u> ^{1,4} ; Pedram Argani ¹ ; Yan Li ¹ ; Yuan Tian ¹ ; Mary Lopez ² ; Michael Athanas ³ ; Chiun-Sheng Huang ⁴ ; Kuan-Ting Kuo ⁴ ; Daniel Chan ¹ ; Hui Zhang ¹ ; ¹ <i>Pathology, Johns Hopkins Medical Institutions, Baltimore, MD; ²Thermo Fisher Scientific, Cambridge, MA; ³VAST Scientific,</i>	Detection of Security Relevant Substances with Single Photon Ionization Mass Spectrometry within complex Matrices; <u>Jasper Hoelzer</u> ¹ ; Elisabeth Schramm ¹ ; Ralf Zimmermann ² ; ¹ <i>Helmholtz-Zentrum Muenchen, Neuherberg, Germany; ²University of Augsburg, Augsburg, Germany</i>
TP 629			Nanopost Array (NAPA) Photonic Ion Sources for Soft Laser Desorption Ionization; <u>Bennett N Walker</u> ¹ ; Jessica A. Stolee ¹ ; Deanna Pickel ² ; Scott Reterrer ² ; Akos Vertes ¹ ; ¹ <i>George Washington University, Washington, DC; ²Oak Ridge National Laborator, Oak Ridge, TN</i>
TP 630			Ionization Mechanisms in MALDI – A Case Study of Fullerene C60; <u>Ilko Bald</u> ; Benedikt Ómarsson; Oddur Ingolfsson; <i>University of Iceland, Reykjavik, Iceland</i>
TP 631			Examining Matrix Ion-Pair Hypothesis of MALDI Mechanism Using Synchronized Dual-Polarity MALDI-TOF Mass Spectrometry; <u>Yi-Sheng Wang</u> ; Bo-Hong Liu; Yuan T. Lee; <i>Academia Sinica, Taipei, Taiwan</i>
TP 632			
TP 633			
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TP 636			
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TP 638			
TP 639			
TP 640			
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TP 642 **Ion Transport Processes in API Sources: Temporally and Spatially Resolved APLI Measurements;** Matthias Lorenz; Walter Wissdorf; Sonja Klee; Hendrik Kersten; Klaus J. Brockmann; Thorsten Benter; *University of Wuppertal, Wuppertal, Germany*

TP 643 **Proton Source of Matrix-Assisted Laser Desorption/Ionization Using an Infrared Laser;** Sachiko Suzuki; Tamami Fujita; Satoshi Fukumoto; Hiroshi Horiike; Kunio Awazu; *Osaka University, Osaka, Japan*

TP 644 **Laser Desorption Ionization Mass Spectrometry of Heavy Alkali Earth Metal Cations;** Freneil Jariwala¹; Athula B. Attygalle²; ¹*Stevens Institute of Tech, Hoboken, NJ*; ²*Stevens Institute of Technology, Hoboken, NJ*

TP 645 **Distinct Features of Matrix-Assisted 6 μ m Infrared Laser Desorption/Ionization Mass Spectrometry;** Yoshinao Wada¹; Michiko Tajiri²; Takae Takeuchi³; ¹*Osaka MCHRI, Osaka, Japan*; ²*CREST, JST, Izumi, Osaka, Japan*; ³*Nara Women's University, Nara, Japan*

TP 646 **Ab Initio Study on ionization and Fragmentation in Matrix-Assisted Infrared and Ultraviolet Laser Desorption/Ionization Mass Spectrometry;** Takae Takeuchi^{1,2}; Seika Nabe¹; Yoshinao Wada³; Michiko Tajiri⁴; ¹*Nara Women's University, Nara, Nara, Japan*; ²*AIST, Ikeda, Osaka, Japan*; ³*Osaka MCHRI, Izumi, Osaka, Japan*; ⁴*CREST, Izumi, Osaka, Japan*

TP 647 **Fast Photography of Infrared Laser Plume Ejection in Ambient Mass Spectrometry;** Xing Fan; Kermit K. Murray; *Louisiana State University, Baton Rouge, LA*

FORENSICS, 648 - 665

TP 648 **Orthogonal Array Optimization of Microwave-Assisted Derivatization for Determination of Trace Amphetamine and Methamphetamine Using Negative Chemical Ionization Gas Chromatography-Mass Spectrometry;** Li-wen Chung¹; Keh-Liang Lin²; Thomas Ching-Cherng Yang³; Maw-Rong Lee¹; ¹*National Chung-Hsing University, Taichung, Taiwan*; ²*Chung Shan Medical University, Taichung, Taiwan*; ³*National Kaohsiung Normal University, Kaohsiung, Taiwan*

TP 649 **Drug Screening in Non-Derivatized Urine by Automated Solid Phase Microextraction (SPME) and Comprehensive Multidimensional Gas Chromatography Time-of-Flight Mass Spectrometry (GCxGC-TOFMS);** Scott Pugh; John R. Heim; Mark Libardoni; *LECO Corporation, St. Joseph, MI*

TP 650 **LC/MS/MS Analysis of Rodenticide Anticoagulants in Hair;** Juergen Wendt¹; Joerg Roehrich²; Siegfried Zoerlein²; Juergen Becker²; Reinhard Urban²; ¹*Agilent Technologies, Waldbronn, Germany*; ²*Institute of Legal Medicine, Uni Mainz, Mainz, Germany*

TP 651 **Characterization of Homemade Explosives (HMEs) and Other Compounds of Military Interest by Ion Chromatography – Tandem Mass Spectrometry (IC-MS/MS);** John A. Tokarz; Joy M. Ginter; *US Army - ECBC, Aberdeen Proving Ground, MD*

TP 652 **LC/MS/MS Reveals Unexpected Metabolism of 6-Acetylmorphine in Pain Management Patients;** Bridgit Crews¹; Charles Mikel¹; Sergey Latyshev¹; Robert West¹; Amadeo Pesce¹; Patrick Friel²; Ann Smith³; ¹*Millenium Laboratories, San Diego, CA*; ²*Toxicology Laboratory WSP Forensic Laboratory, Seattle, Wa*; ³*eLab, Atlanta, GA*

TP 653 **High Throughput Analysis of Performance Enhancing Drugs by Automated Solid-Phase**

TP 654 **Extraction and Liquid Chromatography Time-of-Flight Mass Spectrometry;** Brian Shofran; *LECO Corporation, St. Joseph, MI*

TP 655 **Use of MRM3 for Easy and Selective Detection of THC Carboxylic Acid Direct from Hair;** Detlef Thieme³; Hans Sachs²; Birgit Schlutt¹; Axel Besa¹; ¹*Applied Biosystems, Darmstadt, Germany*; ²*FTC Munich, Munich, Germany*; ³*Department of Sports Medicine and Doping Analysis, Kreischa, Germany*

TP 656 **Direct Surface Analysis of Inorganic Salts by Desorption Electrospray Ionization (DESI);** Ewa Sokol; Ayanna Jackson; Nathaniel Sanders; R. Graham Cooks; *Purdue University, West Lafayette, IN*

TP 657 **MALDI-TOF-MS Fingerprinting of Condom Lubricants and Residues and Their Differentiation from Biological Fluids;** Sandra Spencer¹; Kevin Schug²; ¹*Univ. of Texas at Arlington, Arlington, TX*; ²*University of Texas at Arlington, Arlington, TX*

TP 658 **Mass Spectrometry and Illicit Drug Testing: Application of GC/MS for the Study of Liposomes as Masking Agents in Sport Doping;** Alessandra Tieri^{1,2}; Xavier de la Torre²; Simone Esposito²; Francesco Botre^{1,2}; ¹*Sapienza University of Rome, Rome, Italy*; ²*Laboratorio Antidoping FMSI, Rome, Italy*

TP 659 **Simultaneous On-Line Extraction and LC/MS/MS Analysis of THC and Metabolites in 5 Minutes;** James F Byrd; *Thermo Fisher Scientific, Franklin, CA*

TP 660 **Analysis of Gabapentin in Equine Plasma by Liquid Chromatography-Tandem Mass Spectrometry;** Ying Liu¹; Xiaoqing Li¹; Cornelius Uboh²; Lawrence R Soma¹; Fuyu Guan¹; Youwen You³; Jeffrey Rudy⁴; Jinwen Chen¹; ¹*University of Pennsylvania, Kennett Square, PA*; ²*West Chester University, West Chester, PA*; ³*University of Pennsylvania, West Chester, PA*; ⁴*PA Equine Toxicology, West Chester, PA*

TP 661 **Soot as a Forensic Tool in the Mass Spectrometric Detection of Chemical Warfare Agents in the Field;** Ronny Robbins; William M. Lagna; *US Army, Gunpowder, MD*

TP 662 **Forensic Identification of Binary and Ternary Microbial DNA Mixtures Utilizing ESI-TOF Mass Spectrometry;** Joshua K. Stone²; Bruce Budowle¹; James M. Robertson¹; Brian Eckenrode¹; ¹*Fed Bureau of Investigation, Quantico, VA*; ²*Oak Ridge Institute for Science and Education, Oak Ridge, TN*

TP 663 **GCxGC-MS Analysis of Ricin Processing Carbohydrate Markers;** David Wunschel; Heather A Colburn; Antolick Kate; Jon H Wahl; Helen Kreuzer; Angie Melville; Karen L. Wahl; *Pacific Northwest National Laboratory, Richland, WA*

TP 664 **Extreme Dilution and Large-Volume Injection: Eliminates Matrix Effects while Maintaining Sensitivity for the Analysis of Drugs in Urine;** Syam Sundar Andra¹; Patrick N. Friel²; Jennifer A. Field¹; ¹*Oregon State University, Corvallis, OR*; ²*Washington State Toxicology Laboratory, Seattle, WA*

TP 665 **Withdrawn**

TP 666 **Laser Desorption Mass Spectrometry of Inorganic Compounds of Forensic Interest;** Josette Marrero; Emily O'Neill; Trevor Cornell; John Allison; *The College of New Jersey, Ewing, NJ*